

**ATTACHMENT F: RIPARIAN BIRD SURVEY REPORT**



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**SAN DIEGO GAS & ELECTRIC COMPANY AND SOUTHERN CALIFORNIA GAS COMPANY  
PIPELINE SAFETY & RELIABILITY PROJECT  
RIPARIAN BIRD SURVEY REPORT**

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**Prepared for:**



**Prepared by:**



**September 2015**





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# 1 – INTRODUCTION

San Diego Gas & Electric Company (SDG&E) and Southern California Gas Company—hereinafter referred to as “the Applicants”—are proposing Pipeline Safety & Reliability Project (Proposed Project), which involves construction, operation, and maintenance of an approximately 47-mile-long, 36-inch-diameter natural gas transmission pipeline that will carry natural gas from SDG&E’s existing Rainbow Metering Station to the pipeline’s terminus on Marine Corps Air Station (MCAS) Miramar.

Insignia Environmental (Insignia) and Borchers Environmental Management conducted a protocol-level survey for the federally endangered least Bell’s vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) for the Proposed Project in accordance with the United States (U.S.) Fish and Wildlife Service (USFWS) survey protocols for each species (USFWS 2001, Sogge et al. 2010). Insignia assessed the potential for least Bell’s vireo and southwestern willow flycatcher to occur within the Biological Resources Survey Area (BRSA), which includes all Proposed Project components plus an approximately 150-foot buffer on each side of these components. In total, the BRSA covers approximately 2,264 acres.

Surveys for riparian bird species were conducted by Insignia Environmental and Borchers Environmental Management biologists with the required experience and necessary 10(a)(1)(A) recovery permit (number TE065741-3) issued pursuant to the federal Endangered Species Act (FESA). Surveys for least Bell’s vireos began on April 13, 2015 and concluded on July 17, 2015. Least Bell’s vireos were observed within riparian vegetation on four drainages. Surveys for the southwestern willow flycatcher began on May 14, 2015 and concluded on July 17, 2015. Southwestern willow flycatcher was detected in one drainage. This report summarizes the field methods and results of the protocol-level surveys for least Bell’s vireo and southwestern willow flycatcher.

## 1.0 SPECIES BACKGROUND

The least Bell’s vireo and southwestern willow flycatcher are both small (10 to 15 grams, or less than an ounce), migratory, insectivorous songbirds that require riparian vegetation for breeding. Both species are present in riparian breeding grounds for only the period between spring and early fall, although least Bell’s vireo arrives on breeding grounds six to eight weeks earlier than southwestern willow flycatcher. Both species have experienced marked historic population declines as a result of widespread, human-caused loss and degradation of riparian vegetation in the southwest.

Although the geographic ranges in Southern California for these two species are largely coincidental, their ecologies differ in several aspects. The least Bell’s vireo forages for small arthropods directly on plant foliage, whereas southwestern willow flycatcher relies primarily on aerial insects for food. Least Bell’s vireo generally occurs in higher densities than southwestern willow flycatcher and has shown a greater propensity in recent decades for recolonizing riparian areas where the species had been extirpated. In contrast, southwestern willow flycatcher does not readily return to its former breeding grounds, even after habitat has recovered or been restored.

Although these species overlap somewhat in their preferences for habitat structure, least Bell's vireo tends to inhabit lower, less layered, and often more fragmented, woody riparian vegetation that is often associated with earlier successional stages. Southwestern willow flycatcher prefers riparian stands with a higher, layered canopy and requires relatively larger stands of vegetation. Both species nest relatively low (one to three meters, or one to ten feet, above the ground) in riparian vegetation, regardless of the height of available substrate, but southwestern willow flycatcher's nest placement is more variable and is generally higher than that of least Bell's vireo (Franzreb 1989, Sogge et al. 2010). Both species are vulnerable to nest parasitism by the brown-headed cowbird (*Molothrus ater*), which lays its eggs in the nests of small host species, resulting in reproductive failure of the hosts. The cowbird, which was self-introduced into California in the early 20th century, has been implicated along with habitat loss as a factor in the decline of several riparian bird species (Rothstein 1994). Least Bell's vireo was listed as endangered under the FESA in May 1986 and southwestern willow flycatcher was listed in February 1995.

## 2 – PROJECT DESCRIPTION

### 2.0 PROJECT OVERVIEW

The Proposed Project involves construction, operation, and maintenance of an approximately 47-mile-long, 36-inch-diameter natural gas transmission pipeline, as well as permanent aboveground equipment that will be appurtenant to the pipeline. The permanent aboveground equipment includes the following:

- approximately 10 new aboveground mainline valves (MLVs) spaced a maximum of five miles apart,
- one pressure-limiting station (i.e., the Rainbow Pressure-Limiting Station),
- three cross-tie facilities (i.e., Line 1600, Line 1601, and Line 2010),
- internal inspection launching and receiving equipment,
- cathodic protection system units with an estimated three rectifiers and three deep-well anode beds at three of the proposed MLVs, and
- an intrusion detection and leak monitoring system.

Construction is scheduled to begin in the first quarter of 2018 and is expected to take 12 to 18 months to complete.<sup>1</sup> The Applicants are required to comply with General Order 112-E in constructing a natural gas transmission pipeline and is choosing to seek a CPCN from the CPUC for the Proposed Project. In addition, because the Proposed Project route includes land under the jurisdiction of the Department of the Navy/U.S. Marine Corps, federal authorizations will be required. In addition to the CPCN and the authorization for rights-of-way (ROWs) on MCAS Miramar, the Applicants will obtain all required permits for the Proposed Project from federal, state, and local agencies prior to construction.

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<sup>1</sup> The construction start date is based on receiving a Certificate of Public Convenience and Necessity (CPCN) from the California Public Utilities Commission (CPUC) by 2017 and issuance of other required permits by late 2017 or early 2018.

It is anticipated that the Department of the Navy will serve as the lead federal agency for the Proposed Project under the National Environmental Policy Act because the Proposed Project will require a new easement for ROWs through MCAS Miramar. Additionally, if the Department of the Navy determines that the authorization for the construction and operation of the Proposed Project “may effect” species listed under the FESA, the lead federal agency will be expected to engage in Section 7 consultation with the USFWS regarding the effects to listed species.

## **2.1 PROJECT LOCATION AND SETTING**

The Proposed Project is located in San Diego County, California, and crosses the cities of San Diego, Escondido, and Poway; unincorporated communities of San Diego County; and federal land. As depicted in Figure 1: Project Overview Map, the potential route begins at SDG&E’s existing Rainbow Metering Station in the unincorporated community of Rainbow and terminates just north of State Route 52 within MCAS Miramar. Within MCAS Miramar, the route parallels an unpaved aqueduct road for approximately 2.6 miles. The Proposed Project will tie into the existing Line 2010 at its southern terminus.

The Proposed Project will be installed primarily within existing roadways and road shoulders. Approximately 41 miles (87 percent) of the Proposed Project will be installed in urban areas within existing roadways and road shoulders, and the remaining approximately six miles (approximately 13 percent) of the Proposed Project will be installed cross-country. The pipeline will be installed approximately 42 inches below the ground surface using conventional trenching methods. The pipeline alignment will cross several major roads (e.g., Interstate [I-] 15) and a number of water features, including Rainbow Creek, the San Luis Rey River, Moosa Creek, San Dieguito River/Lake Hodges, Escondido Creek, Poway Creek, Beeler Creek, Carroll Canyon Creek, and Rose Creek. At the crossings of the San Luis Rey River and Lake Hodges, horizontal directional drilling (HDD) and horizontal boring methods will be implemented to minimize impacts to riparian habitat and water quality. Horizontal boring may be used to install the pipeline beneath other waterbodies, which would allow the pipeline to be installed without disturbing the surface of the area being crossed.

# **3 – REGULATORY FRAMEWORK**

## **3.0 FEDERAL ENDANGERED SPECIES ACT OF 1973**

Because the least Bell’s vireo and southwestern willow flycatcher are both federally listed as endangered, the Proposed Project will need to comply with the FESA in order to address potential impacts to this species. The FESA protects plants and wildlife that are listed as endangered or threatened by the USFWS and the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service. The FESA prohibits take of endangered wildlife, where “take” is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (16 U.S. Code §§ 1532(19), 1538).

Under Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed species (including plants) or its critical habitat. Through consultation and the issuance of a Biological Opinion, the USFWS may issue an incidental take statement, allowing take of the species that is incidental to

another authorized activity, provided that the action will not jeopardize the continued existence of the species. As mentioned previously, it is anticipated that the Department of the Navy will serve as the lead federal agency for the Proposed Project and will be expected to engage in Section 7 consultation with the USFWS regarding the effects to listed species.

## **4 – METHODS**

### **4.0 BACKGROUND RESEARCH**

Background data on the distribution and abundance of least Bell's vireo and southwestern willow flycatcher within the BRSA were obtained through a literature review of publicly available spatial data in ArcGIS, including the California Natural Diversity Database (CNDDDB)—through which a search was conducted for the five miles<sup>2</sup> surrounding the Proposed Project. CNDDDB occurrences of special-status wildlife species are mapped in Figure A-2: CNDDDB Occurrences for Special-Status Wildlife Species in the Biological Resources Technical Report (Insignia 2015). Reference materials were also utilized, such as wildlife occurrence databases and local guides.

In addition, the USFWS Critical Habitat Portal was searched to determine if least Bell's vireo or southwestern willow flycatcher critical habitat was designated within the BRSA. The USFWS Critical Habitat Portal provides geographic information system data showing the location of all final designated critical habitat in San Diego County.

### **4.1 HABITAT ASSESSMENT**

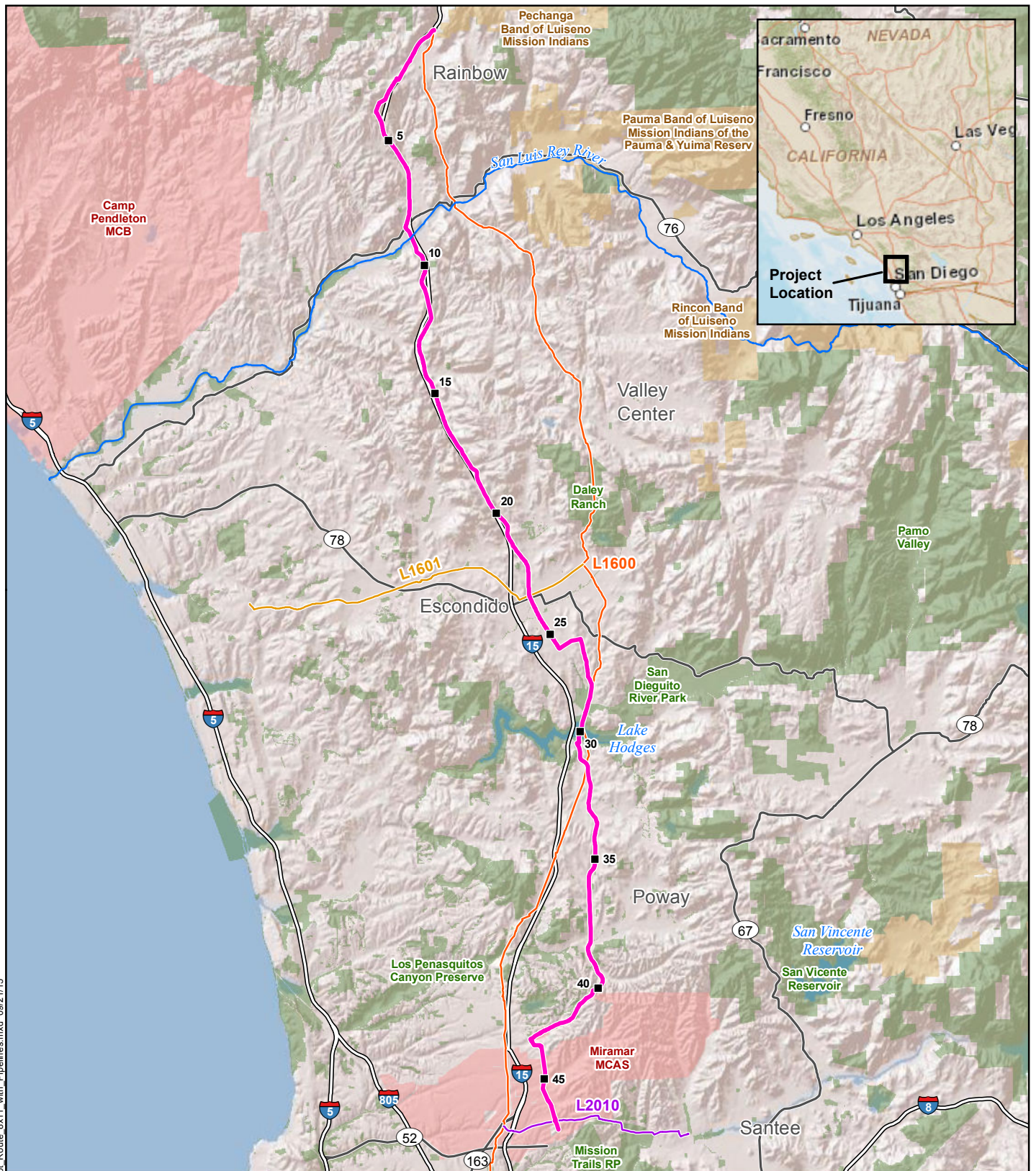
In the fall of 2014 and spring of 2015, Insignia mapped general vegetation communities within the BRSA, which includes all Proposed Project components and an approximately 150-foot buffer on each side of these components. In total, the BRSA covers approximately 2,264 acres, of which approximately 148.9 acres were determined to be either riparian or wetland vegetation, and thus have some potential to support least Bell's vireo or southwestern willow flycatcher. Vegetation mapping conforms to Oberbauer et al (2008).

On April 2 and 3, 2015, Borchers Environmental Management biologists John Lovio (10[a][1][A] recovery permit number TE065741-3) and Andrew Borchers conducted a habitat assessment within the approximately 148.9 acres of wetland and riparian habitat areas. The habitat assessment was conducted to determine the area's suitability to support least Bell's vireo or southwestern willow flycatcher. The biologists focused on riparian habitat areas within the BRSA, but also made notes regarding adjacent habitat's potential to support least Bell's vireo or southwestern willow flycatcher. Habitat was determined to be potentially

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<sup>2</sup> The use of a five-mile buffer is intended to capture all known occurrences within the vicinity and surrounding areas of the Proposed Project. A larger buffer typically includes many species that will not actually occur within the Proposed Project area, and a smaller buffer may omit species with larger geographic ranges from the potential to occur lists.





**Figure 1: Project Overview Map**

**Pipeline Safety & Reliability Project**

- |                          |                            |                            |
|--------------------------|----------------------------|----------------------------|
| ■ Milepost               | — Interstate               | ■ Parks                    |
| — Proposed Project Route | — Major Road/State Highway | ■ Military                 |
| — Line 1601              |                            | ■ Bureau of Indian Affairs |
| — Line 1600              |                            |                            |
| — Line 2010              |                            |                            |

1:320,000  
0 2 4 Miles







suitable for least Bell's vireo or southwestern willow flycatcher if any of the following three criteria were met:

- Vegetation consisting completely or substantially of the following:
  - native, deciduous riparian growth composed of willows (*Salix* spp.) and/or cottonwoods (*Populus fremontii*), with or without native/non-native understory; or
  - well-developed, native woody riparian scrub (e.g., mule fat [*Baccharis salicifolia*] or blue elderberry [*Sambucus nigra* ssp. *caerulea*]); or
  - tall, gallery (i.e., high, closed canopy with variable understory) coast live oak (*Quercus agrifolia*) or a combination of coast live oak and sycamore (*Platanus racemosa*) forest.
- Sites consisting of continuous riparian vegetation or small, closely spaced patches within matrices of natural vegetation on or adjacent to watercourses.
- Sites at least 0.25-acre in size, unless the area within the BRSA is continuous with additional adjacent habitat outside of the BRSA.

Based on these species-specific habitat assessments, it was determined that approximately 61.6 acres of the approximately 148.9 acres did not provide sufficient habitat conditions for either least Bell's vireo or southwestern willow flycatcher, resulting in a total of approximately 87.3 acres of the BRSA that were included in the protocol-level surveys.

## 4.2 PROTOCOL SURVEYS

Surveys for the least Bell's vireo and southwestern willow flycatcher were conducted in accordance with standard protocols provided by the federal government (USFWS 2001, Sogge et al. 2010). Specifically, survey visits for least Bell's vireo were conducted as follows:

- eight times between April 10 and July 31, 2015, with each visit spaced at least 10 days apart;
- at a rate not exceeding 123.5 acres per person per day; and
- between dawn and approximately 11:00 a.m., or under a combination of weather conditions and time of season that were conducive to detecting the species.

Survey visits for the southwestern willow flycatcher were conducted as follows:

- five times between May 15 and July 17, 2015, with the following distribution:
  - one visit between May 15 and 31,
  - two visits between June 1 and 24, and
  - two visits between June 25 and July 17;
- with subsequent visits conducted at least five days apart; and

- between dawn and approximately 11:00 a.m., or under a combination of weather conditions and time of season that were conducive to detecting the species.

Based on geographic proximity and surveyor logistics, the approximately 87.3 acres of potentially suitable habitat for least Bell's vireo or southwestern willow flycatcher were grouped into 28 discrete survey areas, which are shown in Attachment A: 2015 Least Bell's Vireo/Southwestern Willow Flycatcher Survey Area and Sightings. Basic geographic, physical, and vegetation information was collected for each of the 28 survey areas, which are summarized in Attachment B: Survey Area Summary Characteristics Table. Each of the survey areas was visited at an appropriate time of day for each species on eight separate dates between April 13 and July 17, 2015, as detailed in Table 1: Riparian Bird Survey Schedule.

Between one and seven survey areas were surveyed on any given date, depending on the size of the survey area. Starting locations for the daily surveys were rotated throughout the survey period to prevent bias from time of day. The groupings of survey areas changed throughout the survey period as well. For instance, as the season progressed and the average temperatures increased, it became necessary to spread the survey effort over more days to minimize surveying during hot weather.

#### **4.2.0 Occurrence Mapping**

The biologists made repeated survey visits in accordance with survey protocols for both species. Over the course of these visits, the biologists collected multiple sets of occurrence data for least Bell's vireo within polygons persistently occupied by least Bell's vireo. This resulted in the accumulation of clusters of points representing the generalized activity areas for various pairs. The biologists did not map the entire home ranges or territories of these pairs, and focused instead on approximating short-term centers of activity. Point clusters were subsequently reduced to geographic centroids, which represent these activity areas for various pairs of birds.

## **5 – RESULTS AND DISCUSSION**

### **5.0 CNDDDB OCCURRENCE DATA**

There are several CNDDDB occurrences of least Bell's vireo documented between 0.25 and one mile from the BRSA at the following densities and locations:

- Two occurrences are associated with the San Luis Rey River; one is approximately 0.3 mile west of Milepost (MP) 8.8, and the second is located approximately 0.25 mile east of MP 7.5.
- One occurrence is associated with Moosa Creek on the east side of Old Highway 395, approximately 0.25 mile east of MP 14.1.
- One occurrence is documented along Reidy Canyon Creek north of Escondido, approximately one mile east of MP 21.0.

**Table 1: Riparian Bird Survey Schedule**

<b>Biologist(s)</b>	<b>Target Species (Survey Number)</b>	<b>Dates</b>	<b>Weather/Visibility</b>
John Lovio and Andrew Borcher	Least Bell's vireo and southwestern willow flycatcher (habitat assessment)	April 2 and 3, 2015	60 to 86 degrees Fahrenheit (°F), clear, winds up to 3 miles per hour (mph)
John Lovio and Kevin Kilpatrick	Least Bell's vireo (Survey 1)	April 13 to 15, 2015	49 to 77°F, overcast to clear, winds up to 10 mph
John Lovio and Kevin Kilpatrick	Least Bell's vireo (Survey 2)	April 23, 24, 27, 30, and May 1, 2015	47 to 92°F, overcast/light rain to clear, winds up to 5 mph
John Lovio	Least Bell's vireo (Survey 3)	May 4, 6, 8, 11, 12, 13, and 14, 2015	48 to 77°F, overcast/light rain to clear, winds up to 5 mph
John Lovio	Least Bell's vireo (Survey 4) and southwestern willow flycatcher (Survey 1)	May 14, 18, 20, 21, 27, 29, and 30, 2015	50 to 80°F, overcast to clear, winds up to 5 mph
John Lovio	Least Bell's vireo (Survey 5) and southwestern willow flycatcher (Survey 2)	June 1, 4, 5, 8, 9, 13, 2015	57 to 93°F, overcast/light rain to clear, winds up to 8 mph
John Lovio	Least Bell's vireo (Survey 6) and southwestern willow flycatcher (Survey 3)	June 12, 13, 15, 16, 19, 23, and 24, 2015	56 to 89°F, overcast to clear, winds up to 5 mph
John Lovio	Least Bell's vireo (Survey 7) and southwestern willow flycatcher (Survey 4)	June 24, 25, 29, and 30, and July 1, 3, and 7, 2015	61 to 91°F, overcast to clear, winds up to 5 mph
John Lovio	Least Bell's vireo (Survey 8) and southwestern willow flycatcher (Survey 5)	July 6, 7, 9, 10, 13, 15, and 17, 2015	59 to 86°F, overcast to clear, winds up to 5 mph

- One occurrence is associated with Bernardo Creek within Kit Carson Park, approximately 0.25 mile west of MP 28.8.
- Two occurrences are documented in association with the San Dieguito River/Lake Hodges area; one is approximately 0.25 mile west of MP 29.9, and the second is located approximately 0.3 mile west of MP 31.2.

Southwestern willow flycatcher has been documented in the CNDDDB at four separate locations between one and five miles from the BRSA along the San Luis Rey River; three of these occurrences are located 1.5 to 4.5 miles northeast of MP 8.8, and the fourth occurrence is located approximately four miles southwest of MP 8.8. The CNDDDB has also documented southwestern willow flycatcher at one location between one and five miles upstream of the BRSA along the San Dieguito River.

CNDDDB occurrences of least Bell's vireo that have been documented immediately adjacent to the riparian bird survey areas are shown on Attachment A: 2015 Least Bell's Vireo/Southwestern Willow Flycatcher Survey Area and Sightings. All CNDDDB occurrences of least Bell's vireo and southwestern willow flycatcher within five miles of the BRSA are shown in Figure A-2: CNDDDB Occurrences for Special-Status Wildlife Species in the Biological Resources Technical Report (Insignia 2015).

## **5.1 CRITICAL HABITAT**

The USFWS has designated critical habitat for least Bell's vireo within 40.6 acres of the BRSA, and has designated critical habitat for southwestern willow flycatcher within 11.3 acres of the BRSA, as shown in Attachment A: 2015 Least Bell's Vireo/Southwestern Willow Flycatcher Survey Area and Sightings. Designated critical habitat for both least Bell's vireo and southwestern willow flycatcher occurs only within the San Luis Rey River corridor and associated habitats. The San Luis Rey River is also designated by the USFWS as a recovery unit for both the least Bell's vireo and southwestern willow flycatcher.

## **5.2 HABITAT ASSESSMENT**

Based on the habitat assessment, it was determined that a total of approximately 87.3 acres distributed over 28 survey areas should be included in the protocol-level surveys. Survey areas were grouped primarily based on geographic proximity to each other and ranged from 0.1 acre to 17.9 acres. Sites selected for protocol surveys occur within the Santa Margarita River, San Luis Rey River, San Dieguito River, Escondido Creek, or Los Peñasquitos Creek watersheds. The watersheds of the Santa Margarita River, San Luis Rey River, and San Dieguito River include substantial, higher-order<sup>3</sup> riverine plains that are known to support populations or pairs of least Bell's vireo and southwestern willow flycatcher (CDFW 2015). Various stream orders were

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<sup>3</sup> Higher-order stream systems refer to the Strahler stream classification system in which waterways are given an "order" according to the number of additional tributaries associated with each waterway (Strahler 1957). Higher-order streams are at lower elevations in a particular watershed than lower-order streams. Higher-order streams are often wider and move slower than lower-order streams, and they tend to include more expansive riparian habitats that are capable of supporting special-status riparian bird species, such as southwestern willow flycatcher.

represented in the 28 survey areas, ranging from narrow upland gullies to extensive bottomlands of major regional rivers.

The survey areas are shown on Attachment A: 2015 Least Bell's Vireo/Southwestern Willow Flycatcher Survey Area and Sightings. Attachment B: Survey Area Summary Characteristics Table summarizes the geographic locations of the survey areas, the names of the drainages flowing through or associated with the surveys areas, and the vegetation communities observed within the survey areas.

### **5.3 PROTOCOL SURVEYS: LEAST BELL'S VIREO**

Ten least Bell's vireo locations were recorded within the BRSA during the course of the survey effort. Eight of these locations represent documented or presumed breeding pairs based on persistent occurrence of two birds or the observance of nests or fledged young. Two of the locations represent transient occupancy of presumably lone, singing males in mid- to late-breeding season. The numbers and distribution of least Bell's vireo locations are summarized by survey area in Table 2: Least Bell's Vireo Detections within the BRSA.

Two presumed breeding pairs (Locations 7 and 17) were documented on or immediately adjacent to the section of the San Luis Rey River between Old Highway 395 and I-15. This higher-order riparian bottomland is dominated by mature, closed-canopied, mixed willow-cottonwood forest measuring approximately 60 feet tall. The San Luis Rey River is well documented as a regional population center for the least Bell's vireo. HDD will be utilized to construct the Proposed Project under the San Luis Rey River, and no temporary or permanent impacts are proposed within habitats supporting least Bell's vireo in Locations 7 and 17. The two pairs are located approximately 1,000 feet south of the nearest temporary work area (i.e., the HDD workspace area north of the San Luis Rey River), which minimizes the potential for indirect, construction-related impacts (e.g., noise, disruption, etc.) to least Bell's vireo individuals within the San Luis Rey River.

The Moosa Creek location (Location 8) consists of a section of tall (i.e., approximately 60 feet in height on average), old-growth riparian forest located just south of the intersection of Old Highway 395 and Circle R Road. One presumed breeding pair of least Bell's vireo was found at this site, which is a somewhat anomalous location for the species because it comprises a fairly even mix of willow, cottonwood, sycamore, and coast live oak trees on a relatively lower-order drainage. An additional pair was noted 200 to 300 feet southeast of the BRSA. No temporary or permanent impacts to least Bell's vireo habitat are proposed at Location 8, which is approximately 140 feet east of the nearest Proposed Project work area.

The broad floodplain of the San Dieguito River supports several age/size classes of strongly willow-dominated forest in a mosaic with mesic, herbaceous floodplain vegetation. One location of a transient least Bell's vireo (Location 1) was mapped in an isolated willow thicket in the northern part of the floodplain on April 13, 2015 during the early portion of the breeding season. Location 1 is approximately 150 feet east of the nearest Proposed Project work area.

**Table 2: Least Bell's Vireo Detections within the BRSA**

<b>Survey Area</b>	<b>Drainage</b>	<b>Mapped Location Number<sup>4</sup></b>	<b>Least Bell's Vireo Activity at Location</b>	<b>Public Land Survey System Location (Township/Range/Section)</b>	<b>Approximate MP</b>	<b>Within a Planned Impact Area?</b>
6	San Luis Rey River	7 and 17	Two presumed breeding pairs	T10S/R3W/S11	8.8	No
12	Moosa Creek	8	One presumed breeding pair	T11S/R3W/S1	14.0	No
22	San Dieguito River/Lake Hodges	1	One transient	T13S/R2W/S2	29.5	No
23	San Dieguito River/Lake Hodges	2, 3, 5, 6, and 13	Five documented or presumed breeding pairs	T13S/R2W/S11	29.6 (Location 2) 30.0 (Locations 3, 5, 6, and 13)	No
28	Carroll Canyon	19	One transient	T15S/R2W/S5	43.3	No
<b>Total</b>		<b>10</b>	<b>Eight breeding pairs/two transient individuals</b>			

<sup>4</sup> The mapped location numbers correspond to the numbering provided in Attachment A: 2015 Least Bell's Vireo/Southwestern Willow Flycatcher Survey Area and Sightings for each individual mapped location of least Bell's vireo. These points represent a centroid of the short-term centers of activity for individual least Bell's vireos. Home ranges, territories, and use areas were not mapped as part of this protocol survey.

Five documented or presumed breeding pairs (Locations 2, 3, 5, 6, and 13) were mapped farther south within the floodplain throughout the season. Two additional presumed breeding pairs were noted outside of the BRSA during these surveys—one approximately 100 feet southwest of Location 2, and the other approximately 100 feet east of Location 5. Detections of least Bell's vireo both within and adjacent to the BRSA indicate that the wide swath of riparian habitat within the San Dieguito River floodplain is likely at or near saturation by this species.

No temporary or permanent impacts are proposed within any least Bell's vireo locations in the San Dieguito River/Lake Hodges area. Location 2 is located approximately 150 west of the nearest Proposed Project work areas on the north shore of Lake Hodges. HDD will be utilized to construct the Proposed Project under the San Dieguito River/Lake Hodges area, and as a result, no temporary or permanent impacts are proposed within habitats supporting least Bell's vireo in this area. The breeding pairs within the San Dieguito River/Lake Hodges (Locations 3, 5, 6 and 13) are located between 200 and 800 feet north of the nearest temporary work area (i.e., the HDD workspace area on the southern banks of the San Dieguito River/Lake Hodges), which minimizes the potential for indirect, construction-related impacts (e.g., noise, disruption, etc.) to affect least Bell's vireo individuals in the area.

A singing male least Bell's vireo (Location 19) was detected on June 19, 2015 in an open, low-stature (i.e., an average of approximately 20 feet in height) southern willow scrub stand that appears to have been created during the recent habitat restoration in Carroll Canyon, just east of the crossing of Avenue of Nations. The willow vegetation at this location is isolated by extensive growth of tall, non-native eucalyptus (*Eucalyptus* spp.) forests upstream and downstream. The lack of detection of least Bell's vireo at this site prior or subsequent to June 19, 2015 indicates a transient location during the late breeding season. No temporary or permanent impacts to least Bell's vireo habitat are proposed at Location 19, which is approximately 140 feet east of the nearest Proposed Project work area.

#### **5.4 PROTOCOL SURVEYS: SOUTHWESTERN WILLOW FLYCATCHER**

A single willow flycatcher, whose subspecies remains undetermined, was detected once on May 27, 2015, at one site during the survey. The willow flycatcher individual was heard singing within a well-preserved, approximately 50-foot tall, willow-dominated stand along an unnamed tributary of Poway Creek that runs southwest from the intersection of Pomerado Road and Robison Boulevard in the City of Poway (Township 14S, Range 2W, Section 14) at MP 37.6, as shown in Attachment A: 2015 Least Bell's Vireo/Southwestern Willow Flycatcher Survey Area and Sightings. The subspecies of this individual could not be determined during the survey due to the similarity in vocalizations between willow flycatcher subspecies *E. t. brewsteri*—which is a common migrant arriving typically in mid-May (Unitt 2004)—and subspecies *E. t. extimus* (i.e., the southwestern willow flycatcher).

Despite the high-quality habitat (e.g., mature willow forest), this polygon is small and highly isolated by surrounding suburban and commercial development. A summary of the survey area within which this individual willow flycatcher was heard is provided in Attachment C: Willow Flycatcher Survey Form. An occurrence of a willow flycatcher on one day in May or June is consistent with well-documented transient migratory behavior of the species. No temporary or

permanent impacts to riparian habitat are proposed within this stand of southern willow scrub, which is approximately 100 feet east of the nearest Proposed Project work area.

## **6 – DISCUSSION**

Concurrent with the protocol-level surveys for least Bell's vireo and southwestern willow flycatcher, Insignia conducted a preliminary assessment of potentially jurisdictional wetlands and waters, and also refined the vegetation map from which the habitat assessment and survey areas were developed. The assessment of wetlands and waters and the vegetation map refinement resulted in the mapping of approximately 5.9 acres of additional riparian and/or wetland vegetation that could potentially support least Bell's vireo and/or southwestern willow flycatcher. Because riparian bird surveys had already begun by the time the wetlands and waters assessment and the vegetation mapping refinement were completed, these approximately 5.9 acres of potentially suitable least Bell's vireo and southwestern willow flycatcher habitat were not included in the 2015 riparian bird habitat assessment and protocol surveys described in this report. These areas are small, isolated, and have marginally suitable habitat for both species, and are located on minor tributaries within the BRSA. Regardless, the Applicants intend to conduct an additional habitat assessment and protocol-level surveys, if warranted, within these approximately 5.9 acres of potentially suitable least Bell's vireo and/or southwestern willow flycatcher habitat prior to construction.

## **7 – REFERENCES**

- CDFW. 2015. California Natural Diversity Database Maps and Data. Online.  
<https://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Site visited February 7, 2015.
- Franzreb, K.E. 1989. Ecology and conservation of the least Bell's vireo. U.S. Fish and Wildlife Service, Biological Report 89(1). 17 pp.
- Insignia. 2015. San Diego Gas & Electric Company and Southern California Gas Company's Pipeline Safety & Reliability Project Draft Biological Resources Technical Report.
- Oberbauer, Thomas, Meghan Kelly, and Jeremy Buegge. 2008. Draft Vegetation Communities of San Diego County. Online.  
[http://www.sdcanyonlands.org/pdfs/veg\\_comm\\_sdcounty\\_2008\\_doc.pdf](http://www.sdcanyonlands.org/pdfs/veg_comm_sdcounty_2008_doc.pdf). Site visited January 12, 2015.
- Rothstein, S.I. 1994. The cowbird's invasion of the far west: history, causes and consequences experienced by host species. *Studies in Avian biology*, No. 15:301-315.
- Sogge, M.K., D. Ahlers, and S.J. Sferra. 2010. A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher. U.S. Geological Survey Techniques and Methods 2A-10.
- Strahler, A.N. 1957. Quantitative Analysis of Watershed Geomorphology. *Transactions of the American Geophysical Union* 38 (6): 913–920.



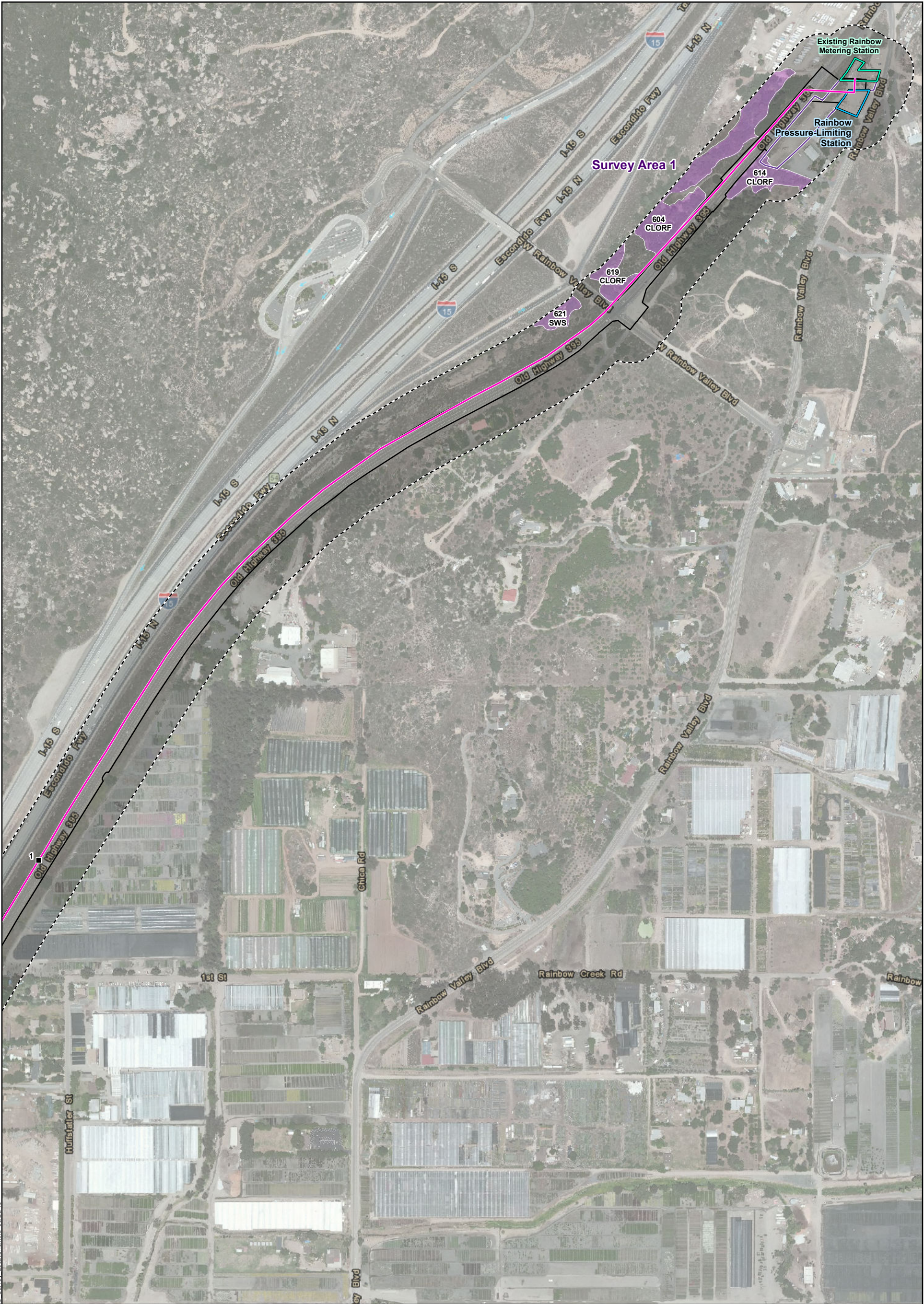
- USFWS. 1998. Draft Recovery Plan for the Least Bell's Vireo. Online. [http://ecos.fws.gov/docs/recovery\\_plan/980506.pdf](http://ecos.fws.gov/docs/recovery_plan/980506.pdf). Site visited August 26, 2015.
- USFWS. 2001. Least Bell's Vireo Survey Guidelines. Online. <http://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/LBVireo.2001.protocol.pdf>. Site visited May 6, 2015.
- USFWS. 2015. Critical Habitat Portal. Online. <http://ecos.fws.gov/crithab/>. Site visited March 4, 2015.
- Unitt, P. 2004. San Diego County Bird Atlas. San Diego Natural History Museum. 645 pages.



**ATTACHMENT A: 2015 LEAST BELL'S VIREO/SOUTHWESTERN WILLOW FLYCATCHER  
SURVEY AREA AND SIGHTINGS**







Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 1 of 20

Pipeline Safety & Reliability Project

■ Milepost

— Proposed Project Route

--- Proposed Trenchless Construction

— Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

Willow flycatcher (subspecies undetermined)

LBV CNDDB Occurrence

LBV Critical Habitat

SWFL Critical Habitat

LBV: least Bell's vireo / SWFL: southwestern willow flycatcher

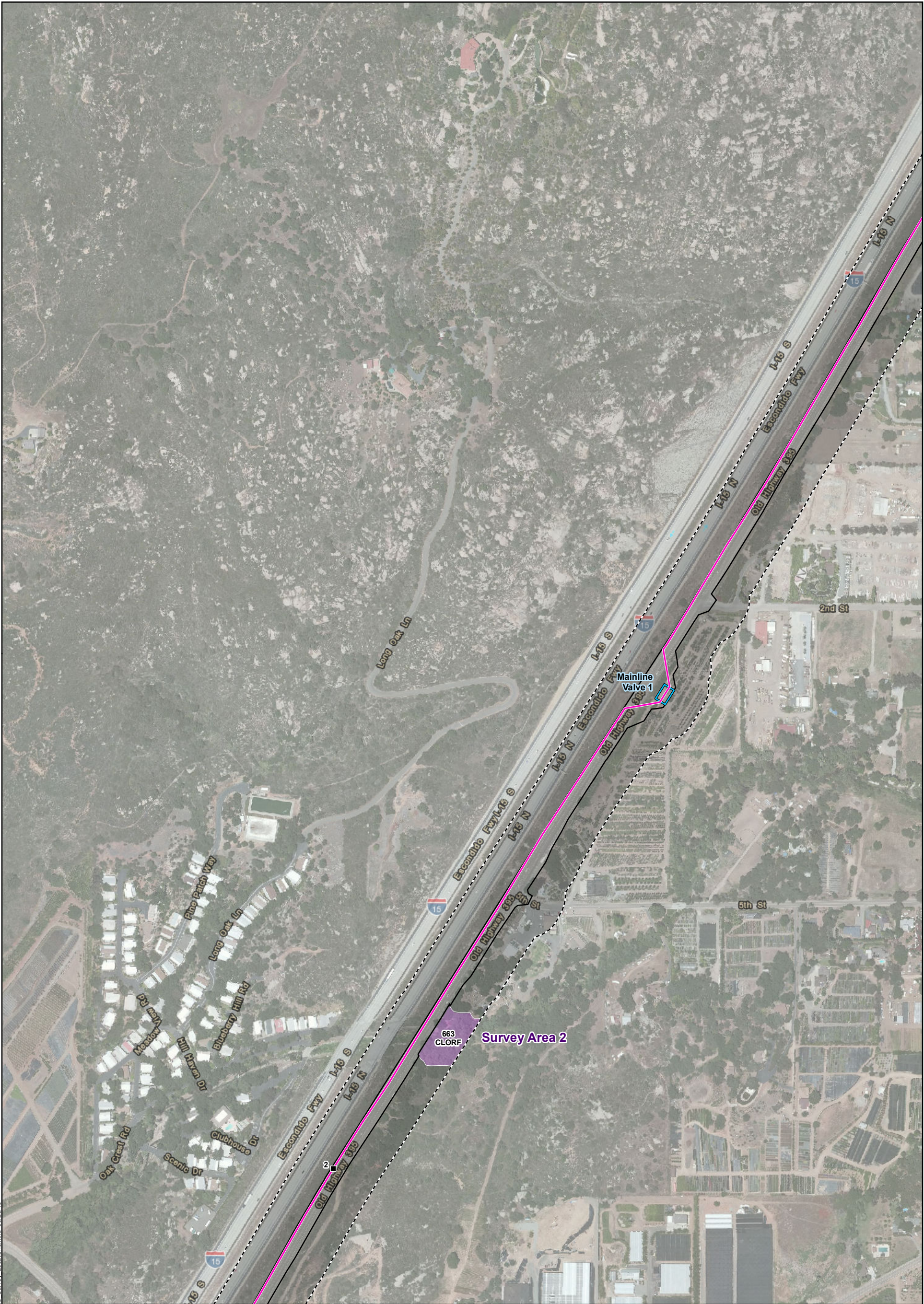
SoCalGas

SDGE

INSIGNIA

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



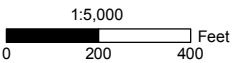


Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 2 of 20

Pipeline Safety & Reliability Project

<div><div></div><div>Milepost</div></div> <div><div></div><div>Proposed Project Route</div></div> <div><div></div><div>Proposed Trenchless Construction</div></div> <div><div></div><div>Cross-Tie Connector Line</div></div> <div><div></div><div>Existing Facility</div></div>	<div><div></div><div>Permanent Impact</div></div> <div><div></div><div>Aboveground Facility</div></div>	<div><div></div><div>Temporary Impact</div></div> <div><div></div><div>Bore Pit</div></div> <div><div></div><div>Horizontal Directional Drill Workspace</div></div> <div><div></div><div>Laydown Area</div></div> <div><div></div><div>Workspace</div></div>	<div><div></div><div>MCAS Miramar</div></div> <div><div></div><div>Biological Resource Survey Area</div></div> <div><div></div><div>LBV/SWFL Survey Area</div></div> <div><div></div><div>Excluded from LBV/SWFL Survey Area</div></div>	<div><div></div><div>LBV Location</div></div> <div><div></div><div>Willow flycatcher (subspecies undetermined)</div></div> <div><div></div><div>LBV CNDDDB Occurrence</div></div> <div><div></div><div>LBV Critical Habitat</div></div> <div><div></div><div>SWFL Critical Habitat</div></div>
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- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



LBV: least Bell's vireo / SWFL: southwestern willow flycatcher



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Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 3 of 20

Pipeline Safety & Reliability Project

■ Milepost

— Proposed Project Route

--- Proposed Trenchless Construction

— Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

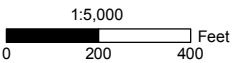
Willow flycatcher (subspecies undetermined)

LBV CNDDDB Occurrence

LBV Critical Habitat

SWFL Critical Habitat

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



LBV: least Bell's vireo / SWFL: southwestern willow flycatcher









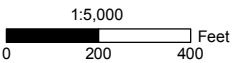


Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 5 of 20

Pipeline Safety & Reliability Project

- |                                  |  |                         |                                    |   |
|----------------------------------|--|-------------------------|------------------------------------|---|
| ■ Milepost                       | <b>Permanent Impact</b>                | <b>Temporary Impact</b> | MCAS Miramar                       | LBV Location                                |
| Proposed Project Route           | Aboveground Facility                   | Bore Pit                | Biological Resource Survey Area    | Willow flycatcher (subspecies undetermined) |
| Proposed Trenchless Construction | Horizontal Directional Drill Workspace | Laydown Area            | LBV/SWFL Survey Area               | LBV CNDDDB Occurrence                       |
| Cross-Tie Connector Line         | Workspace                              |                         | Excluded from LBV/SWFL Survey Area | LBV Critical Habitat                        |
| Existing Facility                |  |                         |                                    | SWFL Critical Habitat                       |

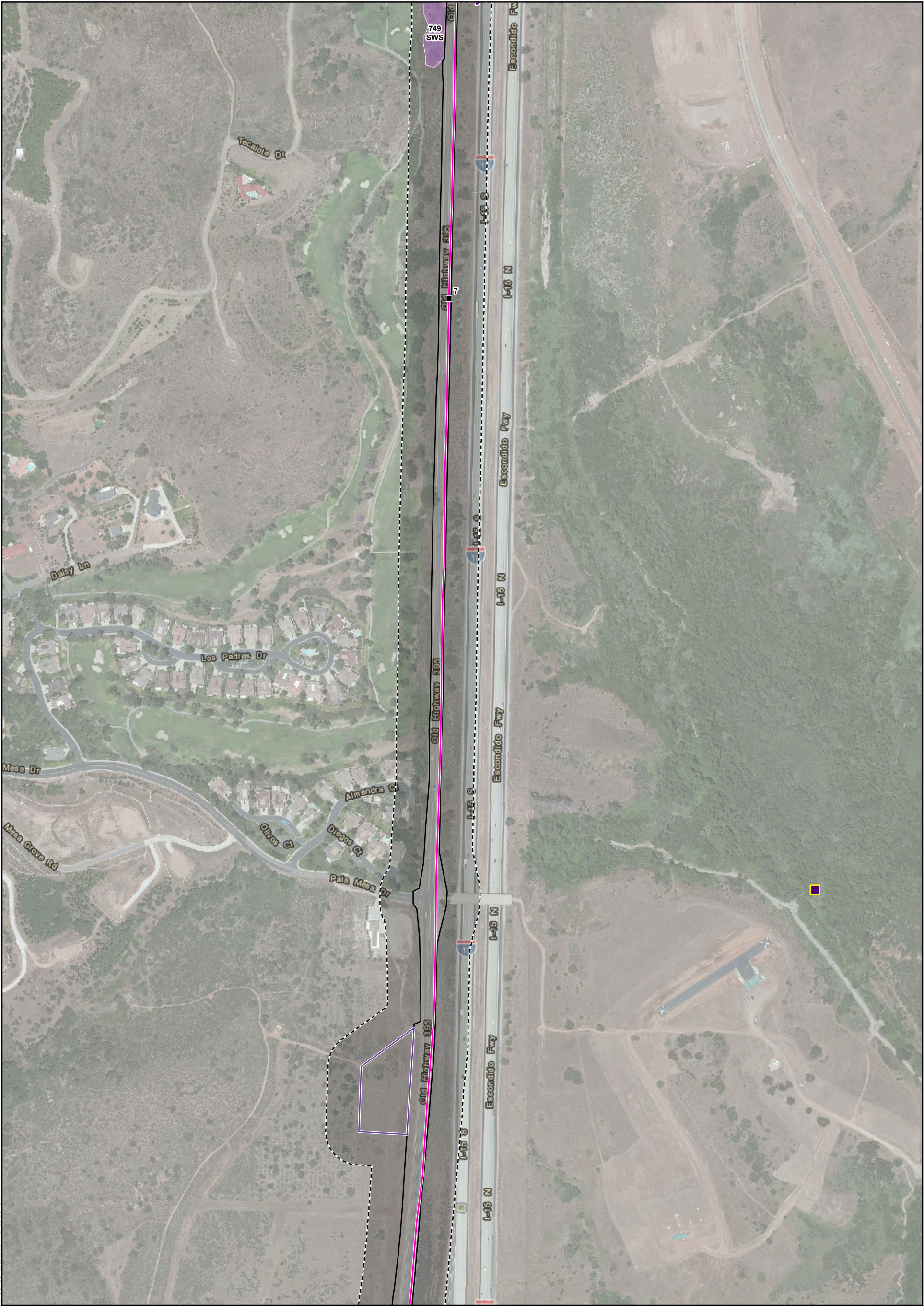
- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



LBV: least Bell's vireo / SWFL: southwestern willow flycatcher





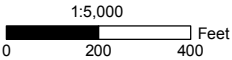


Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 6 of 20

Pipeline Safety & Reliability Project

<div>■ Milepost</div> <div>— Proposed Project Route</div> <div>--- Proposed Trenchless Construction</div> <div>— Cross-Tie Connector Line</div> <div>Existing Facility</div>	<div>Permanent Impact</div> <div>Aboveground Facility</div>	<div>Temporary Impact</div> <div>Bore Pit</div> <div>Horizontal Directional Drill Workspace</div> <div>Laydown Area</div> <div>Workspace</div>	<div>MCAS Miramar</div> <div>Biological Resource Survey Area</div> <div>LBV/SWFL Survey Area</div> <div>Excluded from LBV/SWFL Survey Area</div>	<div>LBV Location</div> <div>Willow flycatcher (subspecies undetermined)</div> <div>LBV CNDDDB Occurrence</div> <div>LBV Critical Habitat</div> <div>SWFL Critical Habitat</div>
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- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



LBV: least Bell's vireo / SWFL: southwestern willow flycatcher

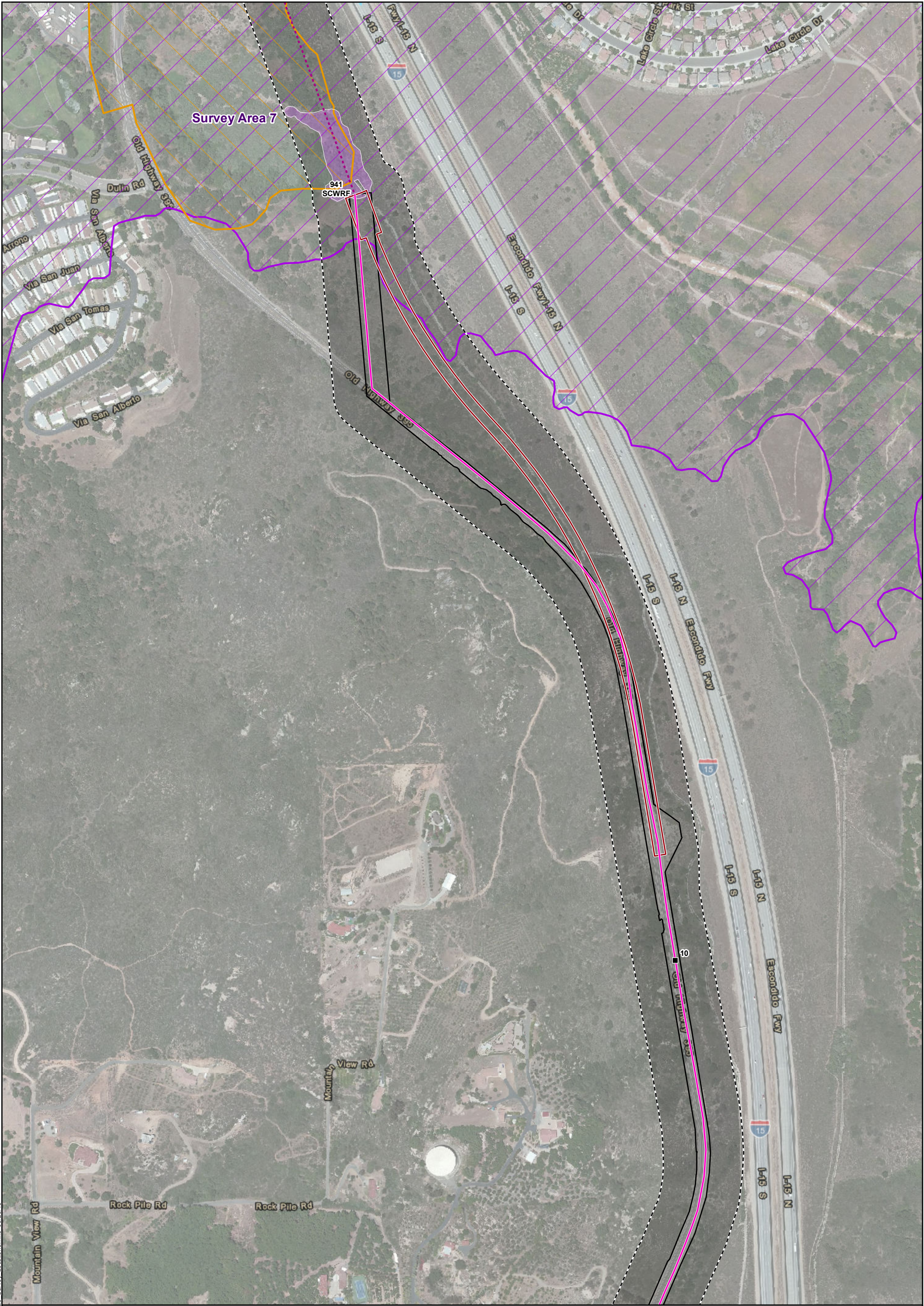


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Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 8 of 20

Pipeline Safety & Reliability Project

■ Milepost

— Proposed Project Route

--- Proposed Trenchless Construction

— Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

Willow flycatcher (subspecies undetermined)

LBV CNDDDB Occurrence

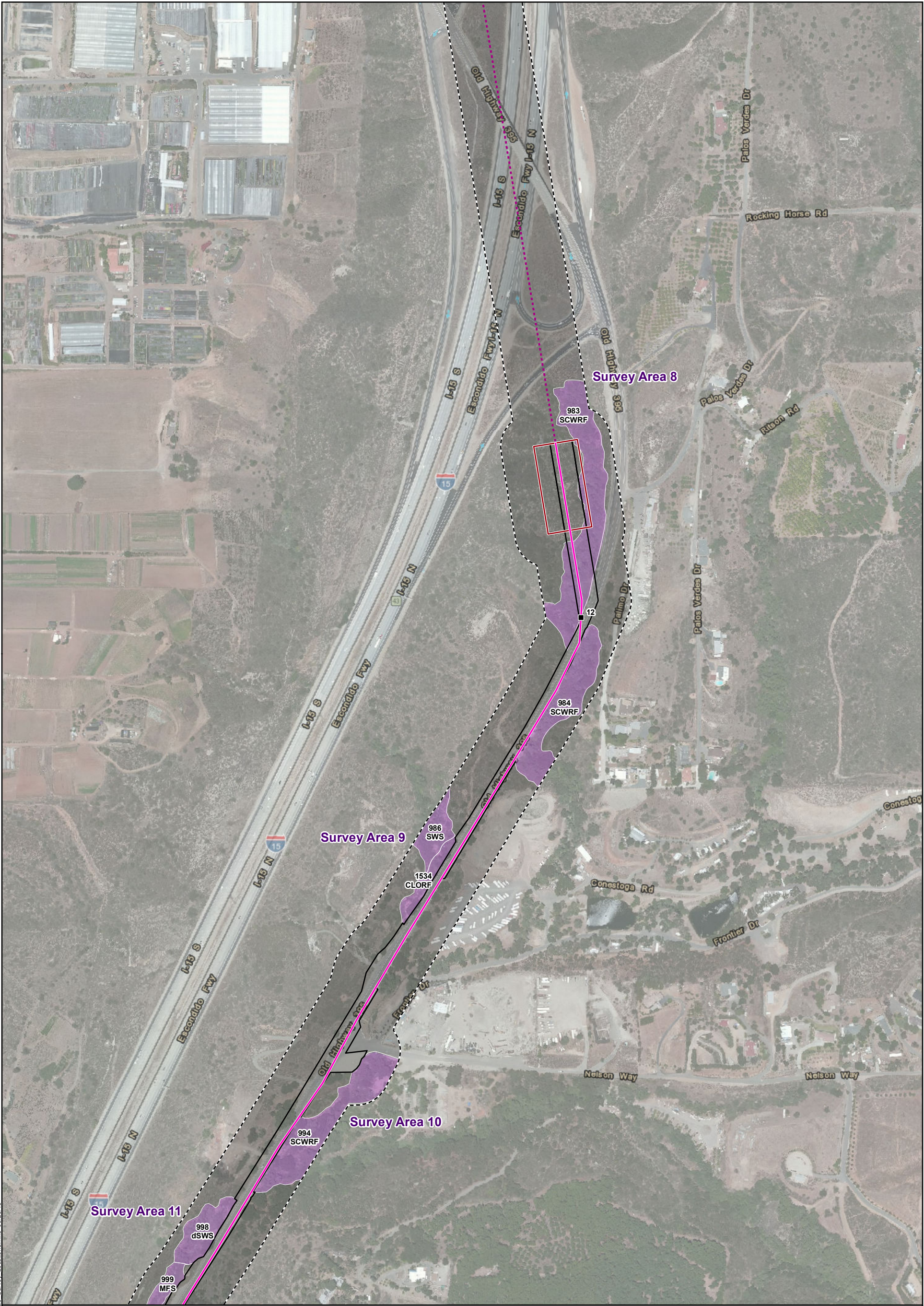
LBV Critical Habitat

SWFL Critical Habitat

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys

LBV: least Bell's vireo / SWFL: southwestern willow flycatcher





Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 9 of 20 Pipeline Safety & Reliability Project

■ Milepost

— Proposed Project Route

--- Proposed Trenchless Construction

— Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

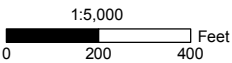
Willow flycatcher (subspecies undetermined)

LBV CNDDB Occurrence

LBV Critical Habitat

SWFL Critical Habitat

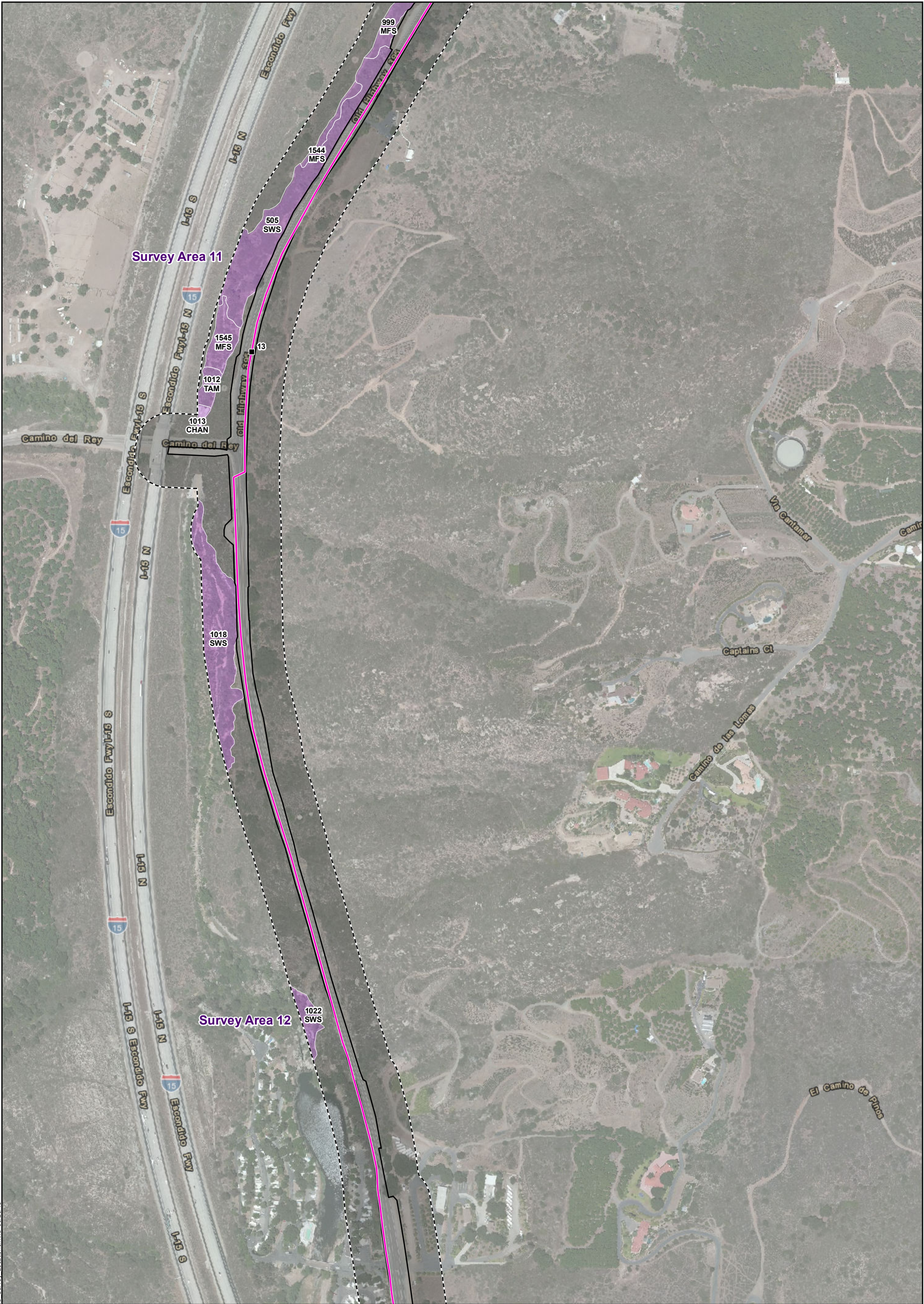
- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



LBV: least Bell's vireo / SWFL: southwestern willow flycatcher







Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 10 of 20 Pipeline Safety & Reliability Project

■ Milepost

— Proposed Project Route

--- Proposed Trenchless Construction

— Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

Willow flycatcher (subspecies undetermined)

LBV CNDDDB Occurrence

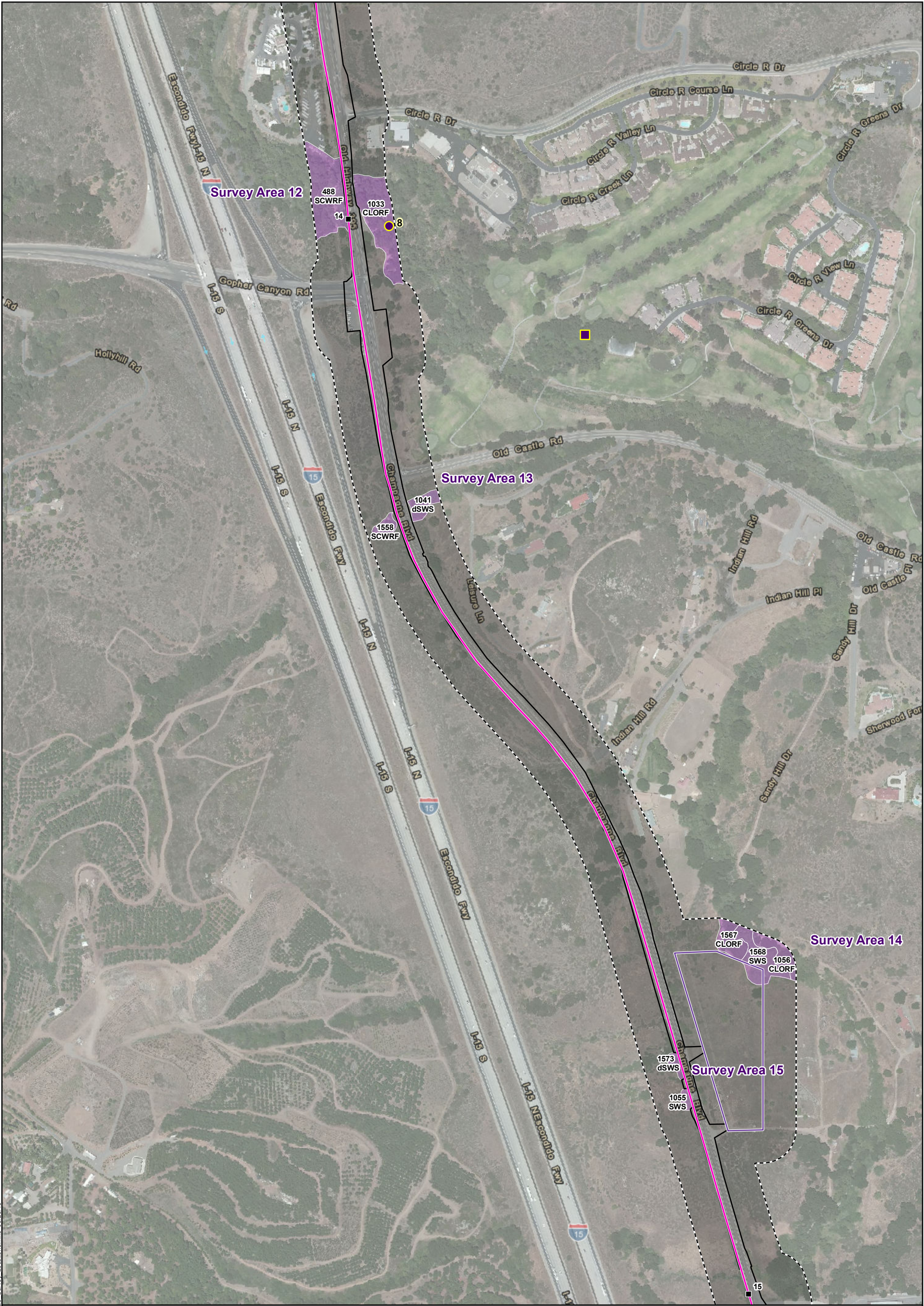
LBV Critical Habitat

SWFL Critical Habitat

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys

LBV: least Bell's vireo / SWFL: southwestern willow flycatcher





Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 11 of 20

Pipeline Safety & Reliability Project

■ Milepost

— Proposed Project Route

--- Proposed Trenchless Construction

— Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

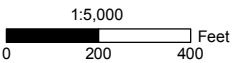
Willow flycatcher (subspecies undetermined)

LBV CNDDB Occurrence

LBV Critical Habitat

SWFL Critical Habitat

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



LBV: least Bell's vireo / SWFL: southwestern willow flycatcher







Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 12 of 20 Pipeline Safety & Reliability Project

■ Milepost

— Proposed Project Route

--- Proposed Trenchless Construction

— Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

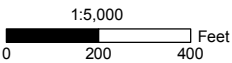
Willow flycatcher (subspecies undetermined)

LBV CNDDDB Occurrence

LBV Critical Habitat

SWFL Critical Habitat

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



LBV: least Bell's vireo / SWFL: southwestern willow flycatcher







Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 13 of 20

Pipeline Safety & Reliability Project

Milepost

Proposed Project Route

Proposed Trenchless Construction

Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

Willow flycatcher (subspecies undetermined)

LBV CNDDDB Occurrence

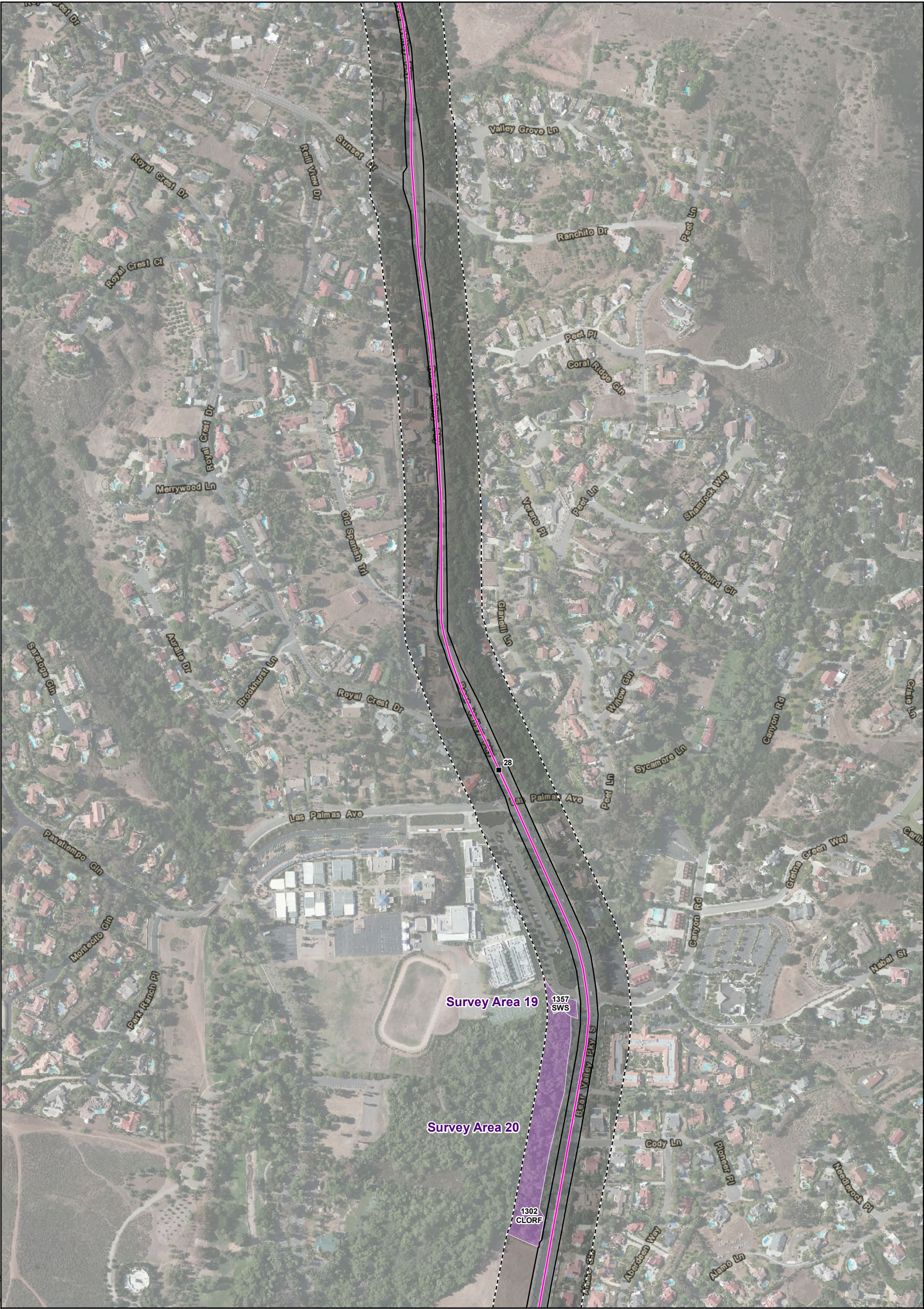
LBV Critical Habitat

SWFL Critical Habitat

LBV: least Bell's vireo / SWFL: southwestern willow flycatcher

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys





Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 14 of 20

Pipeline Safety & Reliability Project

■ Milepost

Proposed Project Route

Proposed Trenchless Construction

Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

Willow flycatcher (subspecies undetermined)

LBV CNDDDB Occurrence

LBV Critical Habitat

SWFL Critical Habitat

LBV: least Bell's vireo / SWFL: southwestern willow flycatcher

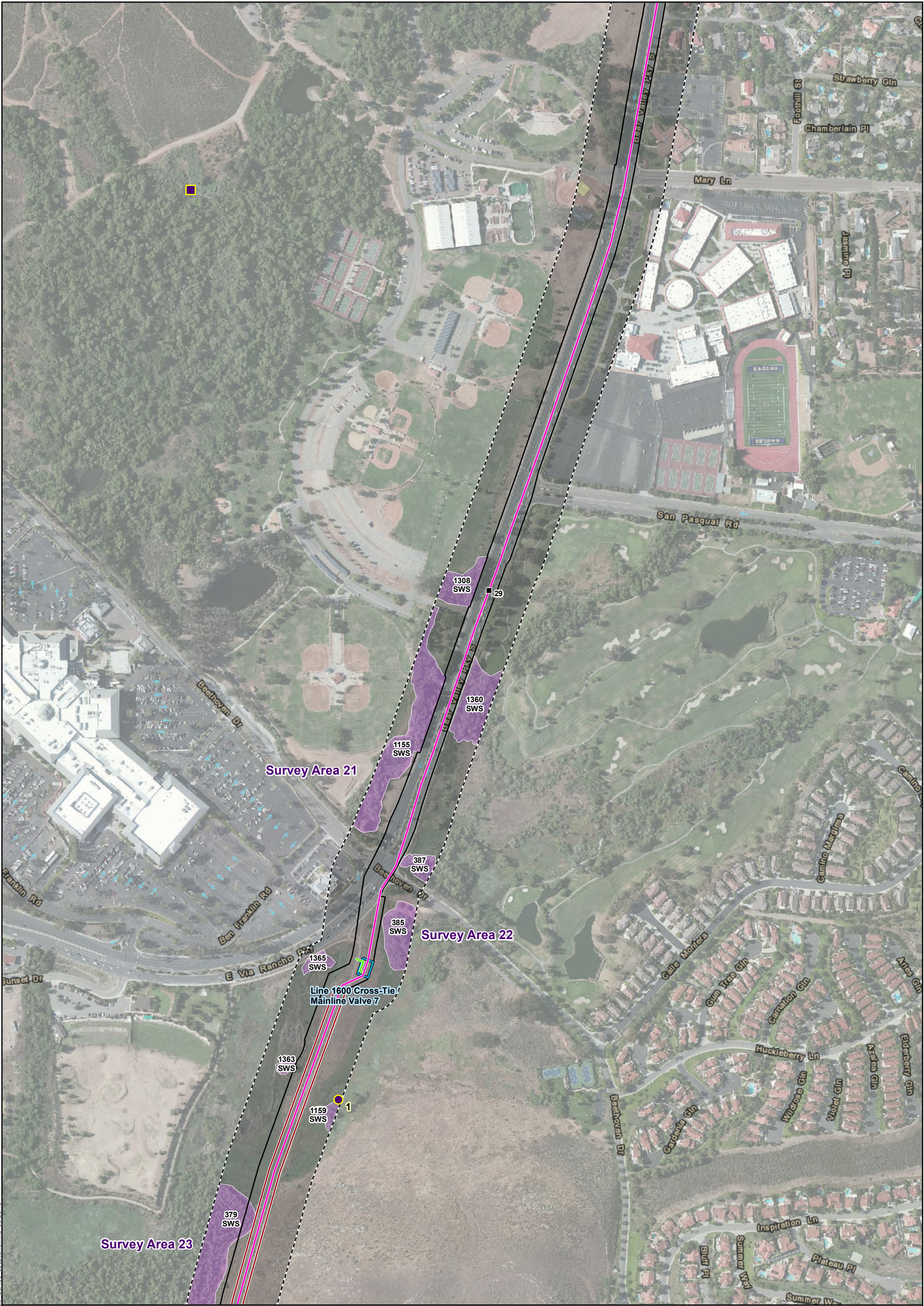
SoCalGas

SDGE

INSIGNIA

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys





Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 15 of 20 Pipeline Safety & Reliability Project

Milepost

Proposed Project Route

Proposed Trenchless Construction

Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

Willow flycatcher (subspecies undetermined)

LBV CNDDB Occurrence

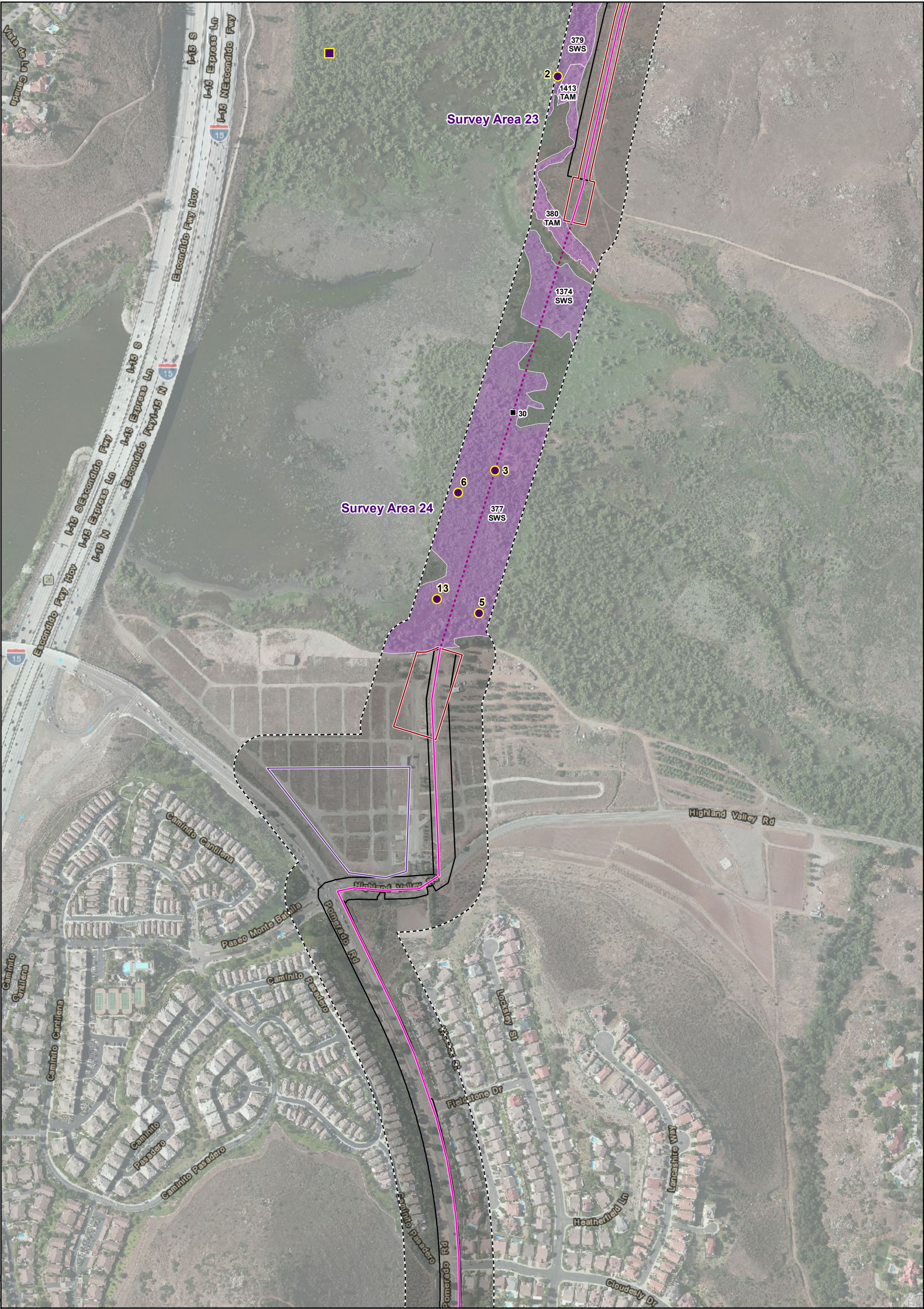
LBV Critical Habitat

SWFL Critical Habitat

LBV: least Bell's vireo / SWFL: southwestern willow flycatcher

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys

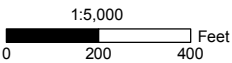




Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 16 of 20 Pipeline Safety & Reliability Project

■ Milepost	Permanent Impact	Temporary Impact	MCAS Miramar	● LBV Location
— Proposed Project Route	▭ Aboveground Facility	▭ Bore Pit	▭ Biological Resource Survey Area	● Willow flycatcher (subspecies undetermined)
— Proposed Trenchless Construction	▭ Horizontal Directional Drill Workspace	▭ Laydown Area	▭ LBV/SWFL Survey Area	■ LBV CNDDDB Occurrence
— Cross-Tie Connector Line	▭ Workspace		▭ Excluded from LBV/SWFL Survey Area	▭ LBV Critical Habitat
▭ Existing Facility				▭ SWFL Critical Habitat

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys

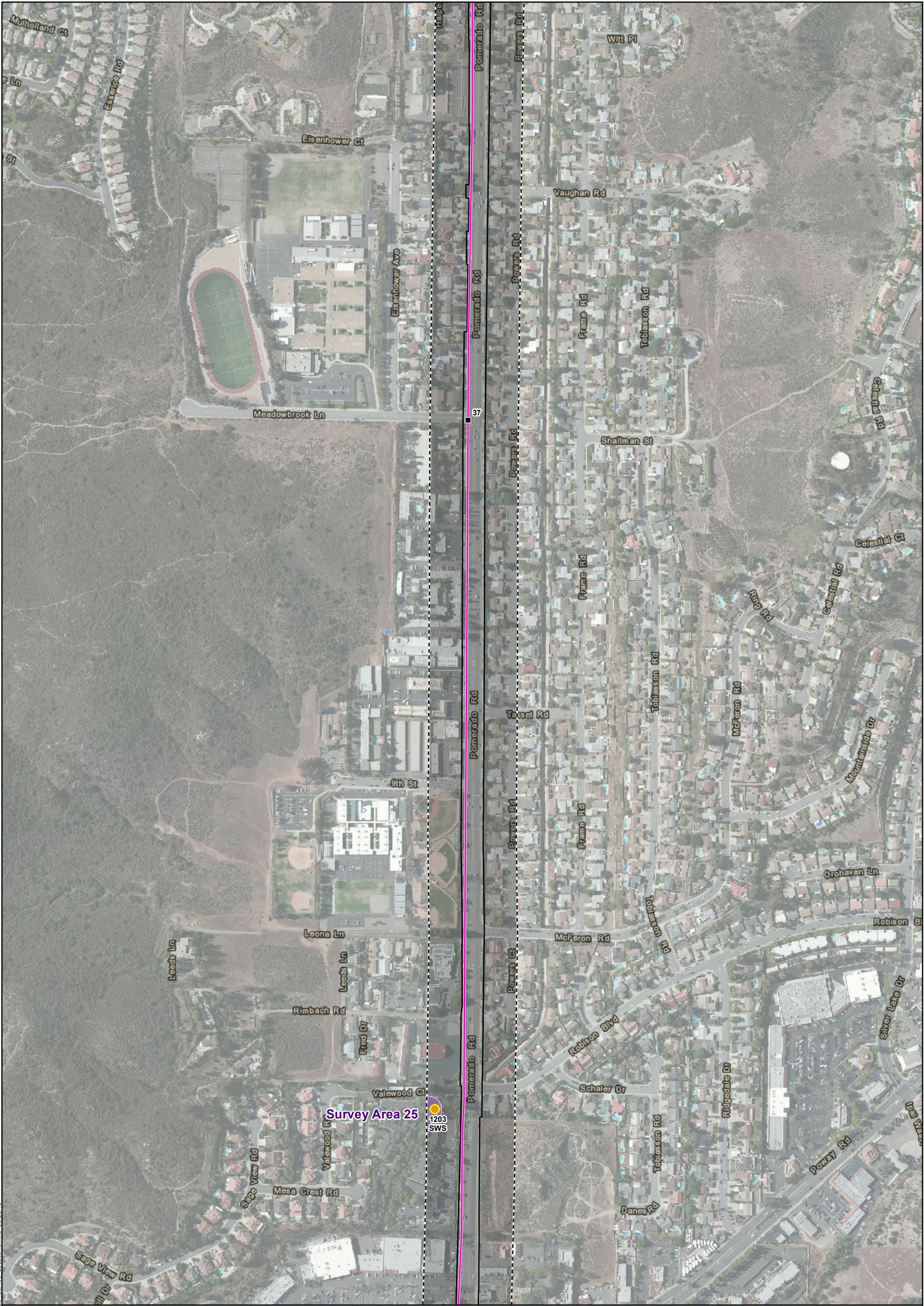


LBV: least Bell's vireo / SWFL: southwestern willow flycatcher



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Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 17 of 20

Pipeline Safety & Reliability Project

■ Milepost

— Proposed Project Route

--- Proposed Trenchless Construction

— Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

Willow flycatcher (subspecies undetermined)

LBV CNDDDB Occurrence

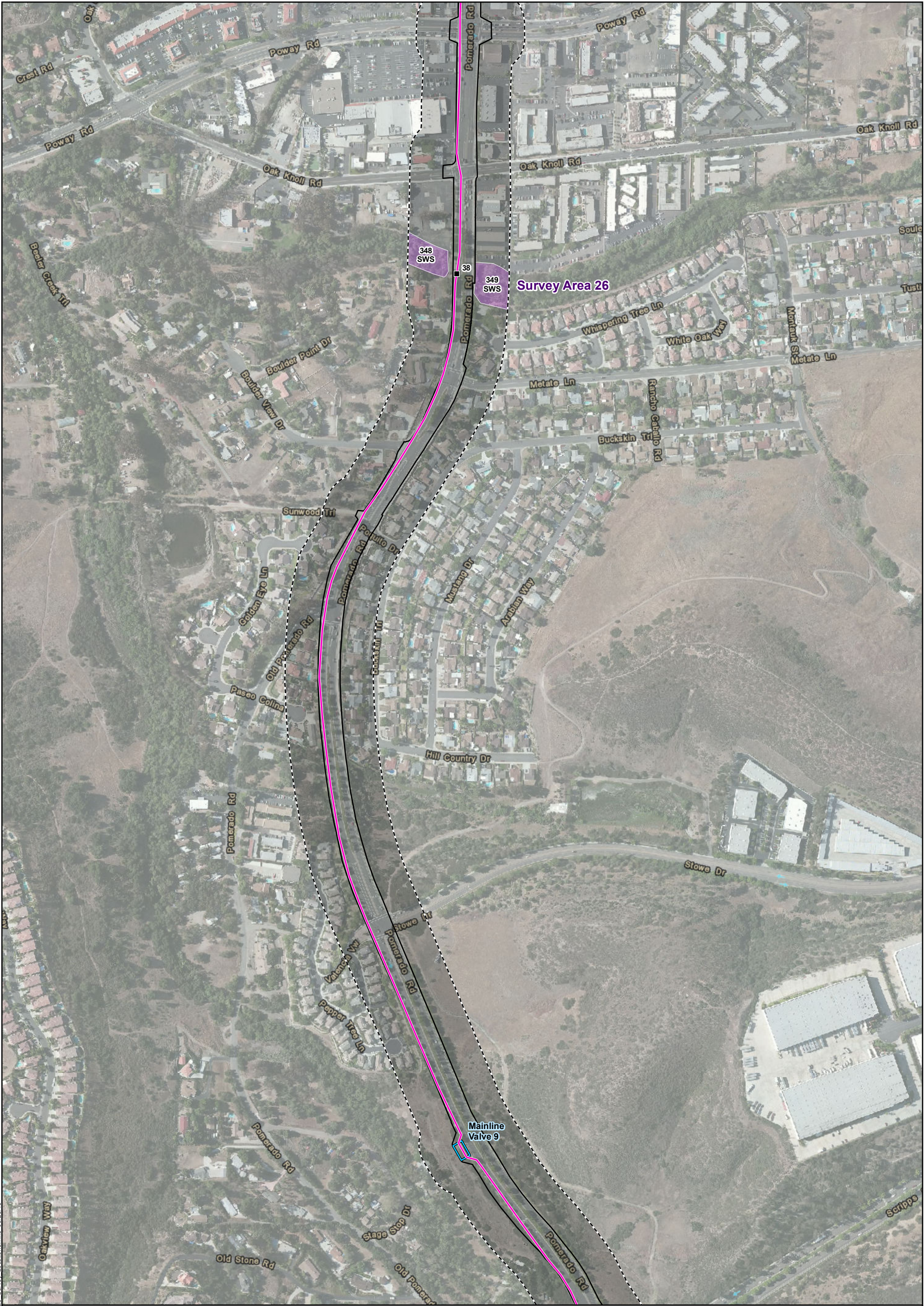
LBV Critical Habitat

SWFL Critical Habitat

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys

LBV: least Bell's vireo / SWFL: southwestern willow flycatcher

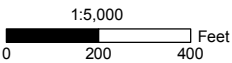




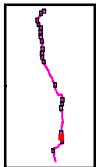
Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 18 of 20 Pipeline Safety & Reliability Project

■ Milepost	<b>Permanent Impact</b>	<b>Temporary Impact</b>	MCAS Miramar	LBV Location
Proposed Project Route	Aboveground Facility	Bore Pit	Biological Resource Survey Area	Willow flycatcher (subspecies undetermined)
Proposed Trenchless Construction	Horizontal Directional Drill Workspace	Laydown Area	LBV/SWFL Survey Area	LBV CNDDDB Occurrence
Cross-Tie Connector Line	Workspace		Excluded from LBV/SWFL Survey Area	LBV Critical Habitat
Existing Facility				SWFL Critical Habitat

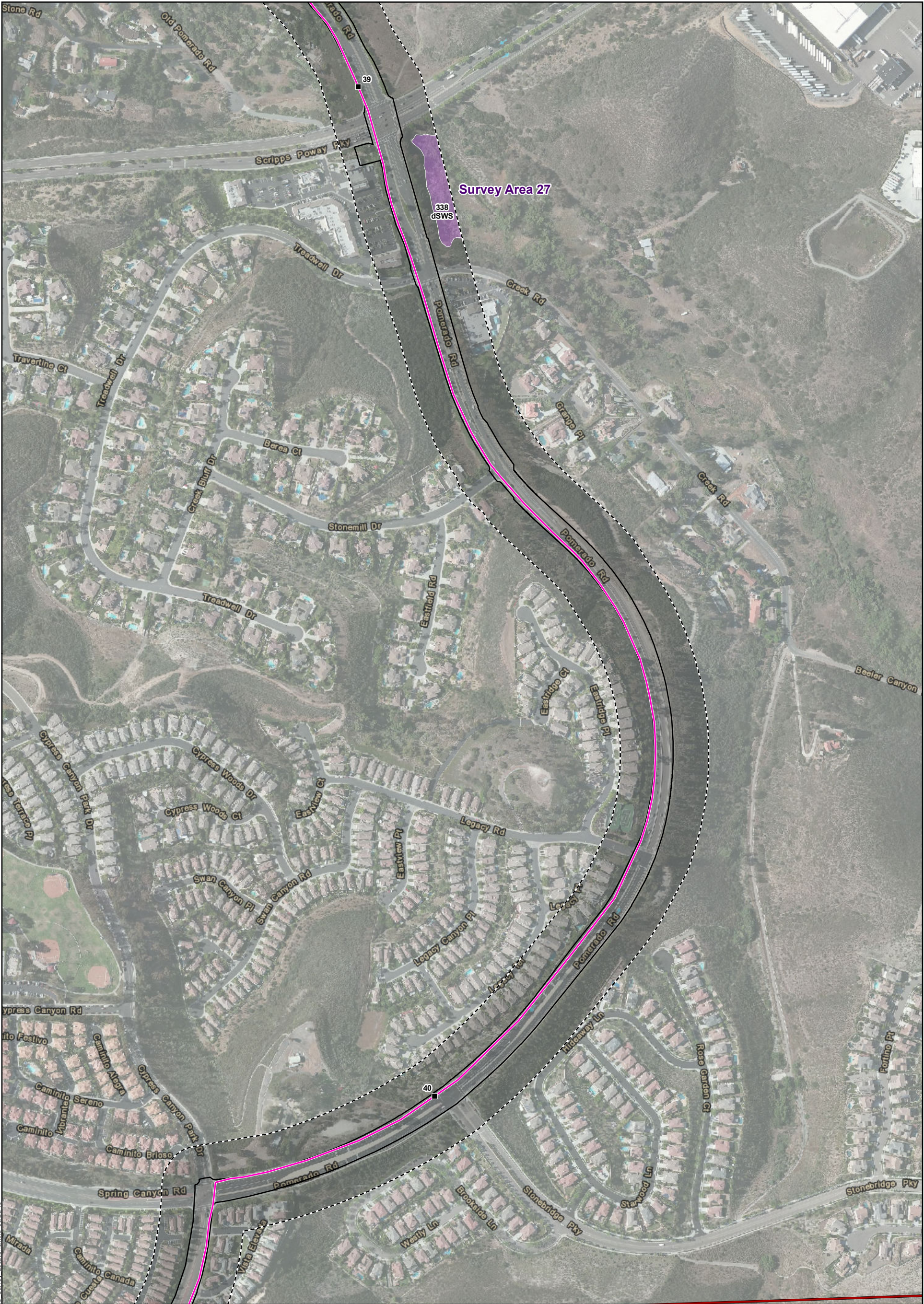
- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



LBV: least Bell's vireo / SWFL: southwestern willow flycatcher







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Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 19 of 20

Pipeline Safety & Reliability Project

Milepost

Proposed Project Route

Proposed Trenchless Construction

Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

Willow flycatcher (subspecies undetermined)

LBV CNDDDB Occurrence

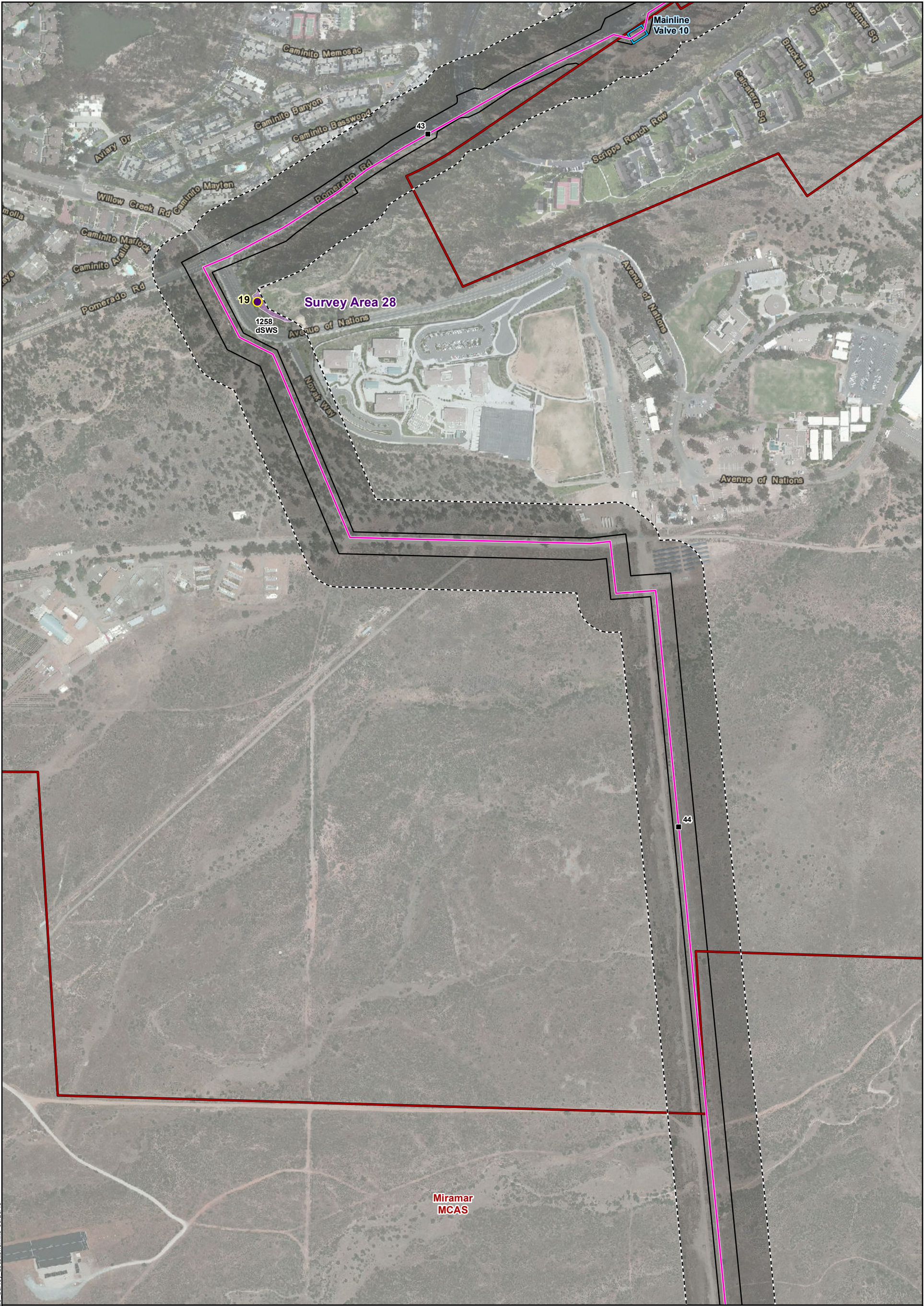
LBV Critical Habitat

SWFL Critical Habitat

LBV: least Bell's vireo / SWFL: southwestern willow flycatcher

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys





Attachment A: 2015 LBV/SWFL Survey Area and Sightings Map 20 of 20 Pipeline Safety & Reliability Project

■ Milepost

— Proposed Project Route

--- Proposed Trenchless Construction

— Cross-Tie Connector Line

Existing Facility

Permanent Impact

Aboveground Facility

Temporary Impact

Bore Pit

Horizontal Directional Drill Workspace

Laydown Area

Workspace

MCAS Miramar

Biological Resource Survey Area

LBV/SWFL Survey Area

Excluded from LBV/SWFL Survey Area

LBV Location

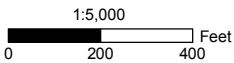
Willow flycatcher (subspecies undetermined)

LBV CNDDDB Occurrence

LBV Critical Habitat

SWFL Critical Habitat

- Please note survey route not shown due to large map scale, meandering transects were walked within suitable habitat during protocol surveys



LBV: least Bell's vireo / SWFL: southwestern willow flycatcher



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**ATTACHMENT B: SURVEY AREA SUMMARY CHARACTERISTICS TABLE**



ATTACHMENT B: SURVEY AREA SUMMARY CHARACTERISTICS TABLE

Survey Area	Unique Vegetation Polygon Identifier	Milepost Number	Drainage Name	Public Land Survey System Location (Township/Range/Section)	Vegetation Community	Riparian Bird Occurrence Summary	Approximate Area (acres)
1	604	0.2	Unnamed tributary to Rainbow Creek	T9S/R3W/S1	Southern Coast Live Oak Riparian Forest	Least Bell's vireo (LBV)/southwestern willow flycatcher (SWFL) not observed	2.3
	614	0.1	Unnamed tributary to Rainbow Creek	T9S/R3W/S1	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	0.7
	619	0.3	Unnamed tributary to Rainbow Creek	T9S/R3W/S1	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	0.5
	621	0.3	Unnamed tributary to Rainbow Creek	T9S/R3W/S1	Southern Willow Scrub	LBV/SWFL not observed	0.3
Survey Area 1 Total							3.9
2	663	1.9	Rainbow Creek	T9S/R3W/S11	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	1.0
Survey Area 2 Total							1.0
3	558	5.5	Unnamed tributary to the San Luis Rey River	T9S/R3W/S26	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	2.8
	560	4.9	Unnamed tributary to the San Luis Rey River	T9S/R3W/S23	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	3.1
	705	4.3	Unnamed tributary to the San Luis Rey River	T9S/R3W/S22	Southern Willow Scrub	LBV/SWFL not observed	0.4
	724	4.8	Unnamed tributary to the San Luis Rey River	T9S/R3W/S23	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	2.0
	733	5.4	Unnamed tributary to the San Luis Rey River	T9S/R3W/S26	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	3.7
	735	5.4	Unnamed tributary to the San Luis Rey River	T9S/R3W/S26	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	0.5
	1429	4.4	Unnamed tributary to the San Luis Rey River	T9S/R3W/S22	Southern Willow Scrub (disturbed)	LBV/SWFL not observed	1.4
	1430	4.6	Unnamed tributary to the San Luis Rey River	T9S/R3W/S23	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	1.2
	1431	4.7	Unnamed tributary to the San Luis Rey River	T9S/R3W/S23	Southern Willow Scrub	LBV/SWFL not observed	1.0
	1432	4.8	Unnamed tributary to the San Luis Rey River	T9S/R3W/S23	Southern Willow Scrub	LBV/SWFL not observed	0.6
	1450	4.3	Unnamed tributary to the San Luis Rey River	T9S/R3W/S22	Southern Willow Scrub	LBV/SWFL not observed	0.4
	1458	5.2	Unnamed tributary to the San Luis Rey River	T9S/R3W/S26	Southern Willow Scrub	LBV/SWFL not observed	0.8
Survey Area 3 Total							17.9
4	1427	6.3	Unnamed tributary to the San Luis Rey River	T9S/R3W/S26	Southern Willow Scrub (disturbed)	LBV/SWFL not observed	1.0
	1428	6.3	Unnamed tributary to the San Luis Rey River	T9S/R3W/S26	Southern Willow Scrub (disturbed)	LBV/SWFL not observed	0.7
Survey Area 4 Total							1.7
5	749	6.7	Unnamed tributary to the San Luis Rey River	T9S R3W S35	Southern Willow Scrub	LBV/SWFL not observed	2.4
Survey Area 5 Total							2.4

Survey Area	Unique Vegetation Polygon Identifier	Milepost Number	Drainage Name	Public Land Survey System Location (Township/Range/Section)	Vegetation Community	Riparian Bird Occurrence Summary	Approximate Area (acres)
6	533	8.8	San Luis Rey River	T10S/R3W/S11	Southern Cottonwood-Willow Riparian Forest	Two LBVs persistent, presumed breeding pairs (Locations 7 and 17)	4.4
	1274	8.7	Unnamed tributary to the San Luis Rey River	T10S/R3W/S11	Mule Fat Scrub	LBV/SWFL not observed	0.7
	1481	8.7	Unnamed tributary to the San Luis Rey River	T10S/R3W/S11	Southern Cottonwood-Willow Riparian Forest (disturbed)	LBV/SWFL not observed	0.5
	1482	8.7	Unnamed tributary to the San Luis Rey River	T10S/R3W/S11	Southern Cottonwood-Willow Riparian Forest (disturbed)	LBV/SWFL not observed	0.7
Survey Area 6 Total							6.2
7	941	9.2	Unnamed tributary to the San Luis Rey River	T10S/R3W/S11	Southern Cottonwood-Willow Riparian Forest	LBV/SWFL not observed	1.6
Survey Area 7 Total							1.6
8	983	12.0	Unnamed tributary to Moosa Creek	T10S/R3W/S25	Southern Cottonwood-Willow Riparian Forest	LBV/SWFL not observed	3.4
	984	12.1	Unnamed tributary to Moosa Creek	T10S/R3W/S25	Southern Cottonwood-Willow Riparian Forest	LBV/SWFL not observed	1.9
Survey Area 8 Total							5.4
9	986	12.2	Unnamed tributary to Moosa Creek	T10S/R3W/S25	Southern Willow Scrub	LBV/SWFL not observed	0.7
	1534	12.3	Unnamed tributary to Moosa Creek	T10S/R3W/S25	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	0.5
Survey Area 9 Total							1.2
10	994	12.5	Unnamed tributary to Moosa Creek	T10S/R3W/S25	Southern Cottonwood-Willow Riparian Forest	LBV/SWFL not observed	2.4
Survey Area 10 Total							2.4
11	505	12.8	Unnamed tributary to Moosa Creek	T10S/R3W/S25 and T10S/R3W/S36	Southern Willow Scrub	LBV/SWFL not observed	3.0
	998	12.6	Unnamed tributary to Moosa Creek	T10S/R3W/S25	Southern Willow Scrub (disturbed)	LBV/SWFL not observed	0.9
	999	12.7	Unnamed tributary to Moosa Creek	T10S/R3W/S25	Mule Fat Scrub	LBV/SWFL not observed	0.6
	1012	13.0	Unnamed tributary to Moosa Creek	T10S/R3W/S36	Tamarisk Scrub	LBV/SWFL not observed	0.3
	1013	13.1	Unnamed tributary to Moosa Creek	T10S/R3W/S36	Non-Vegetated Floodplain or Channel	LBV/SWFL not observed	0.1
	1018	13.3	Moosa Creek	T10S/R3W/S36	Southern Willow Scrub	LBV/SWFL not observed	2.8
	1544	12.8	Unnamed tributary to Moosa Creek	T10S/R3W/S36	Mule Fat Scrub	LBV/SWFL not observed	0.3
	1545	13.0	Unnamed tributary to Moosa Creek	T10S/R3W/S36	Mule Fat Scrub	LBV/SWFL not observed	0.6
Survey Area 11 Total							8.6
12	488	14.0	Moosa Creek	T11S/R3W/S1	Southern Cottonwood-Willow Riparian Forest	LBV/SWFL not observed	1.3
	1022	13.6	Moosa Creek	T10S/R3W/S36	Southern Willow Scrub	LBV/SWFL not observed	0.4
	1033	14.0	Moosa Creek	T11S/R3W/S1	Southern Coast Live Oak Riparian Forest	LBV persistent, presumed breeding pair (Location 8)	1.3
Survey Area 12 Total							3.0

Survey Area	Unique Vegetation Polygon Identifier	Milepost Number	Drainage Name	Public Land Survey System Location (Township/Range/Section)	Vegetation Community	Riparian Bird Occurrence Summary	Approximate Area (acres)
13	1041	14.3	Unnamed tributary to Moosa Creek	T11S/R3W/S1	Southern Willow Scrub (disturbed)	LBV/SWFL not observed	0.3
	1558	14.3	Unnamed tributary to Moosa Creek	T11S/R3W/S1	Southern Cottonwood-Willow Riparian Forest	LBV/SWFL not observed	0.2
Survey Area 13 Total							0.4
14	1056	14.7	Unnamed tributary to Moosa Creek	T11S/R3W/S1	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	0.3
	1567	14.7	Unnamed tributary to Moosa Creek	T11S/R3W/S1	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	0.4
	1568	14.7	Unnamed tributary to Moosa Creek	T11S/R3W/S1	Southern Willow Scrub	LBV/SWFL not observed	0.7
Survey Area 14 Total							1.4
15	1055	14.8	Not associated with a drainage	T11S/R3W/S1	Southern Willow Scrub	LBV/SWFL not observed	0.1
	1573	14.8	Not associated with a drainage	T11S/R3W/S1	Southern Willow Scrub (disturbed)	LBV/SWFL not observed	0.1
Survey Area 15 Total							0.2
16	475	15.2	Unnamed tributary to Moosa Creek	T11S/R3W/S12	Mule Fat Scrub	LBV/SWFL not observed	0.4
	1094	15.1	Unnamed tributary to Moosa Creek	T11S/R3W/S12	Southern Willow Scrub (disturbed)	LBV/SWFL not observed	0.3
Survey Area 16 Total							0.8
17	1107	15.3	Unnamed tributary to Moosa Creek	T11S/R3W/S12	Southern Willow Scrub	LBV/SWFL not observed	0.2
Survey Area 17 Total							0.2
18	412	22.3	Reidy Canyon Creek	T12S/R2W/S9	Southern Willow Scrub (disturbed)	LBV/SWFL not observed	1.0
	839	22.3	Reidy Canyon Creek	T12S/R2W/S9	Southern Willow Scrub	LBV/SWFL not observed	0.7
Survey Area 18 Total							1.7
19	1357	28.2	Unnamed tributary to the San Dieguito River	T12S/R2W/S35	Southern Willow Scrub	LBV/SWFL not observed	0.3
Survey Area 19 Total							0.3
20	1302	28.4	Unnamed tributary to the San Dieguito River	T12S/R2W/S35 and T13S/R2W/S2	Southern Coast Live Oak Riparian Forest	LBV/SWFL not observed	2.9
Survey Area 20 Total							2.9
21	387	29.2	Unnamed tributary to the San Dieguito River	T13S/R2W/S2	Southern Willow Scrub	LBV/SWFL not observed	0.3
	1155	29.1	Unnamed tributary to the San Dieguito River	T13S/R2W/S2	Southern Willow Scrub	LBV/SWFL not observed	2.2
	1308	29.0	Unnamed tributary to the San Dieguito River	T13S/R2W/S2	Southern Willow Scrub	LBV/SWFL not observed	0.6
	1360	29.1	Unnamed tributary to the San Dieguito River	T13S/R2W/S2	Southern Willow Scrub	LBV/SWFL not observed	1.1
Survey Area 21 Total							4.2

Survey Area	Unique Vegetation Polygon Identifier	Milepost Number	Drainage Name	Public Land Survey System Location (Township/Range/Section)	Vegetation Community	Riparian Bird Occurrence Summary	Approximate Area (acres)
22	385	29.3	San Dieguito River	T13S/R2W/S2	Southern Willow Scrub	LBV/SWFL not observed	0.8
	1159	29.5	San Dieguito River	T13S/R2W/S2	Southern Willow Scrub	One LBV transient (Location 1)	0.2
	1363	29.4	San Dieguito River	T13S/R2W/S2	Southern Willow Scrub	LBV/SWFL not observed	0.1
	1365	29.4	San Dieguito River	T13S/R2W/S2	Southern Willow Scrub	LBV/SWFL not observed	0.2
Survey Area 22 Total							1.3
23	379	29.6	San Dieguito River	T13S/R2W/S11	Southern Willow Scrub	One LBV persistent, presumed breeding pair (Location 2)	2.5
	380	29.8	San Dieguito River	T13S/R2W/S11	Tamarisk Scrub	LBV/SWFL not observed	0.8
	1413	29.7	San Dieguito River	T13S/R2W/S11	Tamarisk Scrub	LBV/SWFL not observed	0.7
Survey Area 23 Total							3.9
24	377	30.0	San Dieguito River	T13S/R2W/S11	Southern Willow Scrub	Four LBVs persistent, presumed breeding pairs (Locations 3, 5, 6, and 13)	10.2
	1374	29.9	San Dieguito River	T13S/R2W/S11	Southern Willow Scrub	LBV/SWFL not observed	2.1
Survey Area 24 Total							12.3
25	1203	37.6	Unnamed tributary to Poway Creek	T14S/R2W/S14	Southern Willow Scrub	Willow flycatcher (subspecies undetermined) transient	0.2
Survey Area 25 Total							0.2
26	348	38	Poway Creek	T14S/R2W/S23	Southern Willow Scrub	LBV/SWFL not observed	0.5
	349	38	Poway Creek	T14S/R2W/S23	Southern Willow Scrub	LBV/SWFL not observed	0.6
Survey Area 26 Total							1.2
27	338	39.1	Beeler Creek	T14S/R2W/S26	Southern Willow Scrub (disturbed)	LBV/SWFL not observed	1.1
Survey Area 27 Total							1.1
28	1258	43.3	Carroll Canyon Creek	T15S/R2W/S5	Southern Willow Scrub (disturbed)	One transient LBV (Location 19)	0.1
Survey Area 28 Total							0.1
Total							87.3

**ATTACHMENT C: WILLOW FLYCATCHER SURVEY FORM**





# Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (<http://www.fws.gov/southwest/es/arizona/>) for the most up-to-date version.

## Willow Flycatcher (WIFL) Survey and Detection Form (revised April 2010)

Site Name Pomerado Rd. & Robison, Poway (B28) State CA County San Diego  
 USGS Quad Name \_\_\_\_\_ Elevation 144 (meters)  
 Creek, River, Wetland, or Lake Name Tributary of Pensquitos Creek  
 Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes X No \_\_\_\_\_

Survey Coordinates: Start: E 494115 N 3646285 UTM Datum \_\_\_\_\_ (See instructions)  
 Stop: E 494074 N 3646197 UTM Zone \_\_\_\_\_

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

**\*\* Fill in additional site information on back of this page \*\***

Survey # Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N If Yes, number of nests	Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, <i>Diorhabda</i> spp.]). If <i>Diorhabda</i> found, contact USFWS and State WIFL coordinator	GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary.			
							# Birds	Sex	UTM E	UTM N
Survey # 1 Observer(s) <u>JC</u> <u>Lovio</u>	Date <u>5-27</u> 2015 Start <u>1045</u> Stop <u>1130</u> Total hrs <u>75</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>Singing male.</u>				
Survey # 2 Observer(s) <u>JCL</u>	Date <u>6-8</u> 2015 Start <u>0830</u> Stop <u>0845</u> Total hrs <u>25</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>					
Survey # 3 Observer(s) <u>JCL</u>	Date <u>6-19</u> 2015 Start <u>0930</u> Stop <u>1010</u> Total hrs <u>75</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>					
Survey # 4 Observer(s) <u>JCL</u>	Date <u>7-1</u> 2015 Start <u>0640</u> Stop <u>0735</u> Total hrs <u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>					
Survey # 5 Observer(s) <u>JCL</u>	Date <u>7-13</u> 2015 Start <u>0900</u> Stop <u>0940</u> Total hrs <u>75</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>					
Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings.  Be careful not to double count individuals.  Total Survey Hrs		Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any Willow Flycatchers color-banded? Yes _____ No <u>X</u>  If yes, report color combination(s) in the comments section on back of form and report to USFWS.				

Reporting Individual John C. Lovio Date Report Completed August 2015  
 US Fish and Wildlife Service Permit # TE 065741-3 State Wildlife Agency Permit # SC-9745

**Submit form to USFWS and State Wildlife Agency by September 1<sup>st</sup>. Retain a copy for your records.**

Fill in the following information completely. Submit form by September 1<sup>st</sup>. Retain a copy for your records.

Reporting Individual John Lorio Phone # 619-990-6632  
 Affiliation Consultant E-mail jlorio@cox.net  
 Site Name Pomeroado Rd. at Robison Blvd., Poway (B28) Date Report Completed Aug. 2015

Did you verify that this site name is consistent with that used in previous years? Yes ☐ No ☐ Not Applicable ☒

If site name is different, what name(s) was used in the past? \_\_\_\_\_

If site was surveyed last year, did you survey the same general area this year? Yes ☐ No ☐ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes ☒ No ☐ If no, summarize below.

Management Authority for Survey Area: Federal ☐ Municipal/County ☐ State ☐ Tribal ☐ Private ☒

Name of Management Entity or Owner (e.g., Tonto National Forest) Brookview Retirement Home

Length of area surveyed: 100 (meters)

Vegetation Characteristics: Mark the category that best describes the predominant tree/shrub foliar layer at this site (check one):

☒ Native broadleaf plants (entirely or almost entirely, > 90% native, includes high-elevation willow)

☐ Mixed native and exotic plants (mostly native, 50 - 90% native)

☐ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

☐ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.

Salix lasiolepis, Salix gooddingii, Platanus racemosa

Average height of canopy (Do not include a range): 15 (meters)

Attach copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections.

Attach sketch or aerial photo showing site location, patch shape, survey route, location of any WIFLs or WIFL nests detected.

Attach photos of the interior of the patch, exterior of the patch, and overall site; describe any unique habitat features.

Comments (attach additional sheets if necessary)

migratory stopover in small stretch of good habitat within urban surroundings.  
Well-preserved, but isolated riparian area.

Territory Summary Table. Provide the following information for each verified territory at your site.

Territory Number	All Dates Detected	UTM N	UTM E	Pair Confirmed? Y or N	Nest Found? Y or N	Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior)

Attach additional sheets if necessary